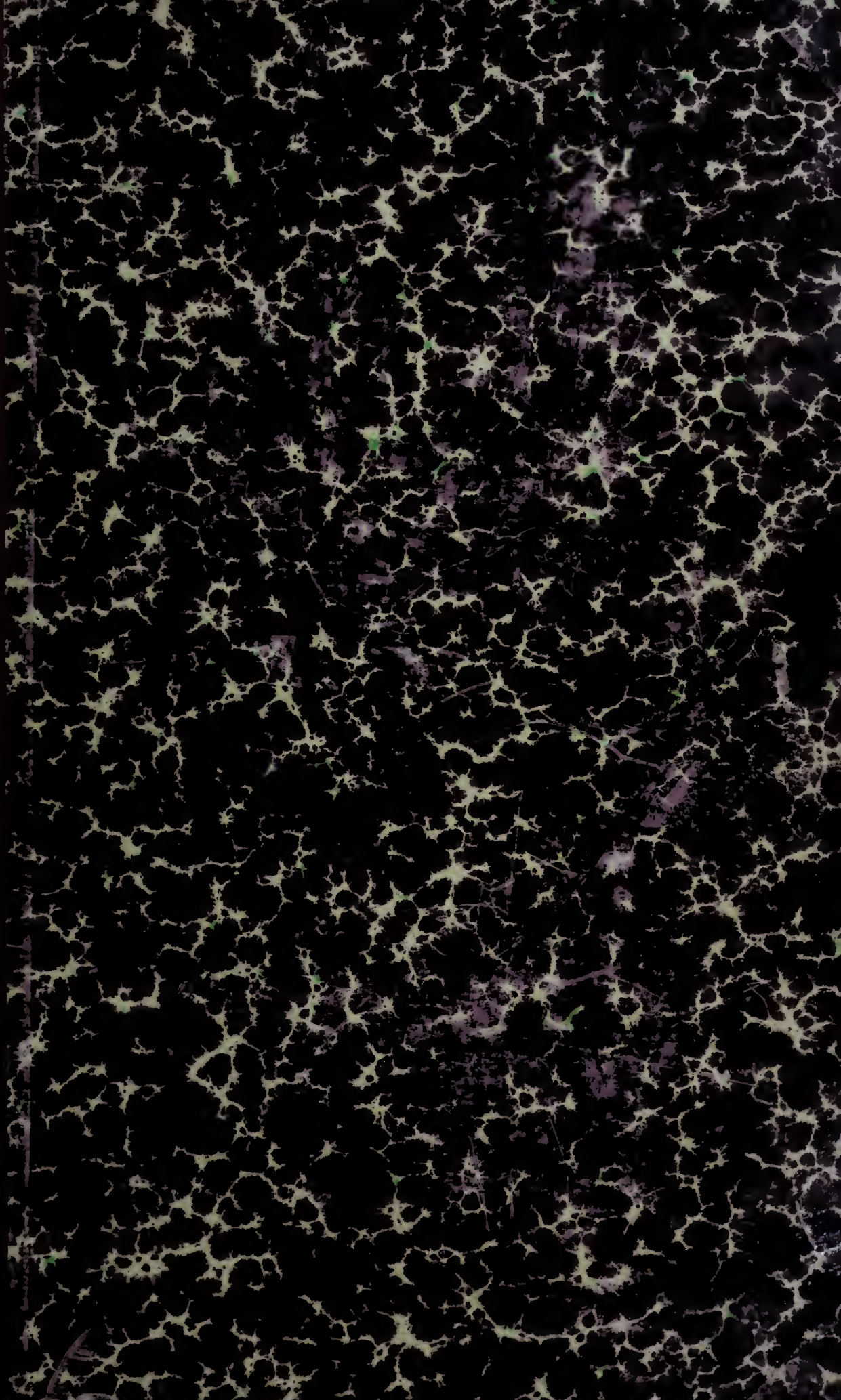
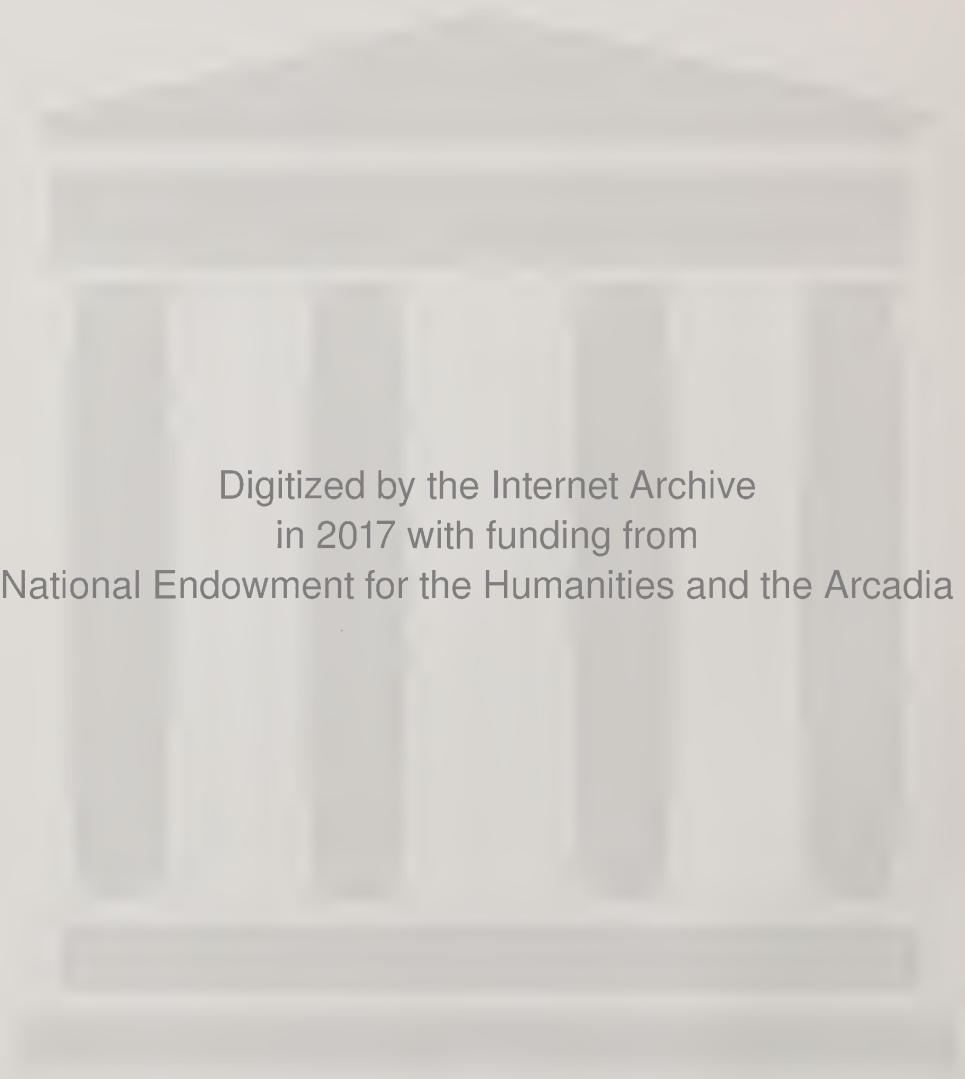


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The JOURNAL
of the
Iowa State Medical Society

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Volume XXXIII, January to December

1943

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The JOURNAL
of the
Iowa State Medical Society

VOL. XXXIII DES MOINES, IOWA, JANUARY, 1943 NO. 1

CARCINOMA OF THE STOMACH: EARLY RECOGNITION AND RESULTS*

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Carcinoma of the stomach is a lesion which occurs sufficiently often and is of such seriousness when it does occur that it should be of interest to all engaged in the practice of medicine. A recent estimate by the Division of Vital Statistics of the Bureau of the Census[1] states that approximately 37,000 people die each year in this country from carcinoma of the stomach. While it is true that it might be difficult to prevent many of these deaths, on the other hand it is equally true that a number of them probably could be prevented by earlier recognition and more prompt treatment of this disease. Although the current treatment of carcinoma of the stomach, as of other malignant lesions, leaves much to be desired, it is a well established fact that a certain number of patients who have gastric malignant lesions can be definitely cured by appropriate treatment. At the present time the only hope of cure of carcinoma of the stomach lies in the recognition of the lesion at a sufficiently early stage to permit its surgical removal. So far as we know now, the only hope of reducing the mortality rate of this disease in the future resides in its recognition early in a higher percentage of cases so that more patients may be afforded the possible benefits of gastric resection. How, then, is cancer of the stomach detected in its early stages? This may be quite simple, extremely difficult or even impossible. Since so much depends on early diagnosis, it seems worthwhile to emphasize certain points which appear to be of importance in this regard.

EARLY DIAGNOSIS

Unfortunately, gastric carcinoma does not present a pathognomonic clinical picture which can always be readily recognized. The symptoms presented by this growth in its early stages may be quite suggestive, but often are minimal, bizarre or confusing. From the point of view of benefit to the patient, we need be interested only in the symptoms presented by early cancer of the stomach. The symptomatic picture of gastric carcinoma presented by many textbooks is that of advanced disease; for the most part, findings which are present only in far advanced carcinoma are stressed. Obviously, it does the patient little good to recognize the disease at this time, since any form of treatment, under these circumstances, will be palliative at best.

A review of the history of the patient suffering from gastric carcinoma reveals that symptoms present early during the development of gastric carcinoma fall into three main categories, which may be termed the "typical," the "ulcer" type, and the "nondescript" type. These syndromes were emphasized several years ago by Wilbur.[2]

Approximately half of the patients who have gastric carcinoma will present the so-called typical history. This history is presented usually by the patient who is middle-aged or older; and in this regard it is well to remember that approximately 7 per cent of the patients on whom gastric resection is performed for carcinoma are forty years of age or less. A patient in this group usually has enjoyed perfect digestion until a few months previously when there was a relatively rapid onset of dyspepsia, which has been constant and progressive in nature. This dyspepsia may consist of anorexia, discomfort after meals, belching, epigastric burning, nausea, or some other type of indigestion. Occasionally vomiting may be present. Gradually, as the symptoms persist, loss of weight and strength may occur. Nothing abnormal is noted on physical examination. The patient who has cancer of the stomach and who presents the ulcer type of story may give a history of long or short duration, varying from a matter of a few months to many years.

Approximately a fourth of the patients who have cancer of the stomach will present the so-called ulcer type of history. At first the symptoms may be typically ulcer in character, and the "pain-food-ease" sequence may be quite definite.

*Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.

These symptoms, which are intermittent at first, usually become constant and then progressive. Measures which ordinarily have afforded relief in the past may fail to do so now. Food may aggravate rather than relieve the distress, and a more or less dull ache may develop in the epigastrium. Nausea and anorexia may supervene. Any such changes in symptoms experienced by a person who has had a long-standing story of ulcer should arouse one's suspicion of the possibility of gastric malignancy.

Approximately a fourth of the patients who have gastric carcinoma will present the so-called nondescript type of history. It is in this type of case that the least information of value is obtained from the history and that diagnosis may be most difficult. Symptoms referable to the gastrointestinal tract may be absent, vague, or at best, quite indefinite. Oftentimes the patient may state that he had the "flu" several months ago and has never regained his strength; often there has been a gradual loss of weight and strength. It is in this group that the patient is encountered who has unexplained anemia caused by gastric carcinoma. For this reason, severe unexplained anemia in any patient should indicate the possibility of carcinoma. It is only by clinical experience and readily aroused suspicion that one will think of the possibility of a gastric malignant lesion in the patient presenting this nondescript type of history, and it is in this group of cases that the early diagnosis may be most difficult to establish.

Physical examination of the patient who has gastric carcinoma may reveal little or much. When diagnosis is made early during the course of the disease, physical examination will not reveal anything abnormal; later when the disease has become more extensive, physical examination may reveal signs of metastasis. The presence of an epigastric mass always indicates that diagnosis has been made late in the development of the disease. Metastatic growths from gastric carcinoma are found most often in the left supraclavicular lymph node, known as Virchow's node, in the cul-de-sac of Douglas (where metastatic lesions are detected by digital examination of the rectum), in the liver (as evidenced by nodular enlargement of the liver), and in the umbilicus. Occasionally, metastatic lesions will be observed elsewhere. These particular regions, however, always should be examined carefully in order to determine whether extension has occurred to them. If such extension is found, the possibility of cure by resection has been lost.

Studies of the blood should be made in order to determine the degree of anemia, and, if dehydration is present, the amount of electrolytic disturbance. Analysis of gastric contents should be performed to determine the value for gastric acids. It is well to remember, however, that only about half of the patients who have gastric carcinoma and who are treated surgically have no free hydrochloric acid present in the gastric contents. Approximately a fourth of the patients have low values for acids, and approximately a fourth have normal or elevated values for gastric acids.

By far the most important method of investigation is roentgenologic examination of the stomach. The importance of the roentgenologist in the diagnosis of early gastric carcinoma cannot be overemphasized. It is only by insistence on competent roentgenologic examination of the stomach in every case in which gastric carcinoma is suspected that the diagnosis will be made early in an appreciable number of cases. It is true that the roentgenologist is not infallible in his diagnosis; however, the competent roentgenologist will fail to detect a lesion in the stomach in the presence of gastric carcinoma in only a very small proportion of cases, not more than 1 per cent. In a somewhat higher proportion, 10 to 15 per cent, the roentgenologist may fail to determine with certainty whether the lesion is actually benign or malignant, and for this decision one's clinical judgment must be employed.[3]

Gastroscopy is assuming a place of increasing importance in the diagnosis of various types of gastric lesions. In questionable cases in which the diagnosis is difficult to establish, it may be of considerable value; at other times the gastroscopist will have the same difficulties experienced by the roentgenologist in determining whether a small ulcerating lesion is benign or malignant. In questionable cases, however, gastroscopy should be employed.

It is thus seen that the means whereby cancer of the stomach can be diagnosed in its early stages, when this opportunity is presented, are within the reach of us all. This is accomplished by appreciating the early symptoms which may be presented by the patient who has gastric carcinoma, by a carefully elicited and properly evaluated history, an easily aroused suspicion of gastric carcinoma, and the insistence, if there is the slightest suggestion of carcinoma, on competent roentgenologic examination of the stomach. This latter practice, of course, will necessitate the roentgenologic examination of many stomachs which prove to be normal; however, it is only by this means that the diagnosis of cancer of the stomach can be established early in a large number of cases.

LATE DIAGNOSIS

What factors lead to late diagnosis of carcinoma of the stomach? Why is it that in so many instances the disease is not recognized until it is far advanced and the chance of cure irreparably lost? In brief, the responsible factors may be divided into three main categories; namely, the "lesion" factor, the "patient" factor, and the "physician's" factor. The lesion factor is one which is extremely difficult to overcome, since it is inherent in the disease itself. It is true, unfortunately, that carcinoma in the cardiac portion of the stomach may attain considerable size before it gives rise to recognizable symptoms. In other words, there is no direct relation in cancer of the stomach between the size of the growth and the duration or type of symptoms which it may produce. Lesions situated in the cardia, or proximal portion of the stomach, may become extremely large and extend to adjacent or even distant structures before their presence is suspected by the development of gastric symptoms. In contrast, relatively small lesions situated in the prepyloric region may cause obstruction at an early date and thereby direct attention to the stomach before the lesion becomes advanced.

The so-called patient factor, which is responsible in some cases for the late diagnosis in carcinoma of the stomach, is composed of several parts. The patient may neglect his symptoms because he considers them trivial or of no importance. He may neglect them because of social or economic reasons which make him hesitate to seek medical attention. He may neglect them because of self-treatment undertaken on his own initiative or through the well-intended but misdirected advice of friends or relatives. Whatever the cause may be, the longer the symptoms are neglected, the more advanced the disease becomes and the less chance of cure remains. By continued efforts at proper education of the lay public, the patient's factor as a cause of late recognition of gastric carcinoma should be gradually reduced.

The third factor, the so-called physician's factor, is the one for which the medical profession is directly responsible. For various reasons, in certain cases we may fail to detect early cancer of the stomach when the opportunity is presented. This subject seems worthy of some discussion.

In some cases early gastric carcinoma may be overlooked because of failure to appreciate the symptoms which this disease may present early in its development. In other cases the presence of a gastric lesion may be detected but the differential diagnosis between a benign and a malignant lesion will be faulty.

The erroneous diagnosis which probably is made most often in the presence of an actual cancer of the stomach is that of benign gastric ulcer. Without going into a discussion as to whether benign gastric ulcer actually may become malignant or not, the fact must be recognized that many small ulcerating carcinomas of the stomach will present a clinical picture quite suggestive of benign ulcer. It is evident that a positive differential diagnosis must always be established between these two conditions if certain early gastric carcinomas are not to be overlooked at a time when the opportunity for cure is best. One may encounter a small ulcerating gastric carcinoma in a patient in his thirties who has a long history suggestive of ulcer, hyperacidity and no loss of weight or anemia. Obviously, one cannot depend alone on the clinical symptoms in the differential diagnosis of these two conditions. The differential diagnosis can be established with certainty in some cases only in one of two ways, either by prolonged, carefully controlled medical management, or by surgical treatment. Usually the roentgenologist is helpful in distinguishing between a benign and a malignant gastric lesion, but at times he may not be able to make this distinction himself and at other times he may be in error in his expressed opinion. If a patient who has gastric ulcer is treated medically, he should be treated not only until all his symptoms have disappeared, but until the ulcer has disappeared completely on roentgenologic examination. Furthermore, he should be re-examined three months or so later to be certain that recurrence has not taken place. Any criteria utilized for the differential diagnosis of gastric ulcer and gastric carcinoma short of these may result in failure.

Occasionally, the erroneous diagnosis of duodenal ulcer may be made in the presence of gastric carcinoma. This occurs most often when there is an obstructing lesion in the pylorus, usually in the presence of hypo-acidity or achlorhydria. Even though the roentgenologist may make the diagnosis of duodenal ulcer, occasionally it is difficult for him to determine with certainty whether the lesion is proximal or distal to the pylorus, or whether it is situated actually in the pylorus. Fortunately this difficulty does not arise often.

Another gastric lesion which must be viewed with suspicion is the gastric polyp, whether it is large or small, singular or multiple. Some gastric polyps are benign and remain so indefinitely; on the other hand, certain gastric polyps may actually be polypoid carcinomas and give rise to malignant growths just as polyps do in the large bowl. If for any reason a gastric polyp is not removed when it is first diagnosed, it should be observed periodically by a roentgenologist, and, if there is any

change in its size or other physical characteristics, exploration is advisable. If this policy is not followed, a large or even inoperable gastric lesion may develop at the site of a previously small, apparently simple, benign gastric polyp.

INDICATIONS FOR TREATMENT

What are the indications for treatment in carcinoma of the stomach after the diagnosis has been established? When should exploration be performed, and when should palliative treatment alone be instituted? In deciding these questions, one must always keep in mind the hopeless prognosis of the patient in case the lesion is not removed. Because of this fact, if there is any opportunity for cure, the patient should be given this possible chance. The clinical history is of little help in determining whether operation should be performed. Physical examination is most helpful. If no metastasis is detected on physical examination, even though the roentgenologist may consider the lesion probably inoperable, the patient is entitled to exploration provided he is in reasonably good physical condition. In contrast, if definite evidence of metastasis is noted on physical examination, it is seldom that exploration is indicated even though the roentgenologist reports an operable lesion.

Oftentimes the roentgenologist will endeavor to help the clinician or surgeon by expressing his opinion regarding the operability of a given neoplasm. Usually he is right in this regard; however, it is well to remember that he is not infallible. In a recent review[3] it was found that of the cases in which operation was performed with a diagnosis of doubtful operability or probable inoperability resection was performed in 20 per cent. This, of course, does not mean that resection was performed in 20 per cent of all cases in which the roentgenologist made this diagnosis, since in by far the large majority of such cases not even exploration was advised, usually because of other evidence of inoperability. The important point, however, is that one must utilize clinical judgment in deciding for or against operation, considering all the findings, and not be guided solely by any one method of clinical investigation.

RESULTS

What results may be expected in the treatment of cancer of the stomach? If one considers all cases in which diagnosis is made, the outlook is rather grim. For example, among 100 people in whom the diagnosis of gastric carcinoma is made, approximately fifty will be found to have inoperable lesions and will be given palliative medical treatment alone. The remaining fifty will be subjected to exploration. Of these, resection will be performed on about twenty-five, and the remaining twenty-five will have exploration alone or some palliative procedure performed. Of the twenty-five patients who have resection performed, about three on the average will succumb following the operation, so that only twenty-two of the original 100 patients in whom the diagnosis of gastric carcinoma was established will have an opportunity for cure. Approximately one in three, or seven of these twenty-two patients, will be living five years after the operation.

In contrast, if one considers only the cases in which resection has been performed, and the patient has survived operation, the picture is not so discouraging. We find that 28.9 per cent are living five years after operation, 20.4 per cent are living ten years after operation, and 12.2 per cent of the patients are living fifteen years after operation. Study of the postoperative survival rates among normal people of comparable age has revealed that if a patient who has gastric carcinoma survives five years after gastric resection, his life expectancy virtually is identical with that of the normal person, so that the "five-year cure" appears to be a reliable criterion of ultimate results.

Of the many factors which influence the postoperative survival rate, the two most significant in our experience are the grade of the lesion and the presence or absence of involvement with malignancy of the regional lymph nodes. It is true, unfortunately, that approximately two out of three carcinomas which occur in the stomach are high grade. The five-year survival rate after removal of grade 1 lesions is 86.2 per cent; for grade 2 lesions, 58.8 per cent; for grade 3 lesions, 30.2 per cent and for grade 4 lesions, 23.3 per cent. When regional lymph nodes are not involved, the five-year survival rate was found to be 43.1 per cent, whereas in the presence of involvement of regional lymph nodes the survival rate was only 16.5 per cent. Prognosis is about the same after removal of a high grade lesion without lymph node involvement as it is after removal of a low grade lesion with involvement of the lymph nodes. While it is realized that results in the treatment of gastric carcinoma leave much to be desired, rather than cause discouragement, they should stimulate us to continued effort in early diagnosis and prompt treatment of this disease.

SUMMARY

Surgical treatment offers the only present hope of cure in gastric carcinoma. Early recognition of the disease is essential if the percentage of cures is to be increased. Early cancer of the stomach may give rise to the so-called typical, ulcer or nondescript history, and insistence on

competent roentgenologic examination, whenever there is the slightest suspicion of gastric carcinoma, should be uniform. Late diagnosis results from a variety of factors, some of which are inherent in the lesion, some of which the patient is responsible for and others of which are the responsibility of the medical profession. An accurate differential diagnosis always should be made between a benign and malignant ulcerating lesion in the stomach. Of patients who have gastric resection performed for carcinoma, one may expect 28.9 per cent to be living five years later.

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PRIMARY FRACTURES OF THE HIP*

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Each year at this time the majority of the physicians and surgeons in Iowa leave their offices to attend the state medical meeting. We come here primarily to gain knowledge and increase our perfection; and, incidentally, we make this a period of rest.

In surgery many of our successes are brilliant, and on the other hand our failures may be bitter. It is only by a proper evaluation of our past successes and failures that we can gain perfection. In the final analysis, a perfection is limited either because the giver cannot or will not give more, because the receiver cannot or will not receive more, or because the perfection or gift excludes some higher perfection. The surgeon is the donor, the patient is the recipient, and the surgeon's gift is the embodiment of his judgment, ability and skill. This gift will depend to a great extent on his own efforts. If the intellect of every surgeon in this audience could embrace truth beyond which there is no knowing and good beyond which there is no willing, then we would enjoy perfection in the highest degree.

In choosing this subject for a paper before the surgical section of this society, I was prompted by two motives: First, a paper on fractured hips has not been presented before this group for some time, and if such a discussion will provoke renewed enthusiasm in the management of these fractures then it is very proper; and second, I felt that hours of thought and study should be embodied in such a presentation, which, incidentally, increases one's edification.

*Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.

A fracture of the hip is a clinical entity which every physician and surgeon will contact not once but many times in the practice of medicine, and a discussion of such fractures should be of interest to everyone here. The only good thing we can say concerning the etiology of a fracture of the hip is that it is a respecter of youth to a great extent. There is no doubt that the atrophic changes of age render this joint vulnerable, and a fall, a blow, or a twist may result in a fractured hip. There is another anatomic reason for the vulnerability of this joint. If we follow from infancy to old age the angle which the neck makes with the shaft of the femur, we find the angle definitely changes. In infancy the neck makes an obtuse angle with the shaft. The degree of this angle is changed as the patient becomes older, and it finally approaches a right angle. With this change of angle our point and direction of weight bearing change, which makes it possible for a sudden upward thrust of the femur to break the neck. Twenty-five years ago many of you drove the early model cars and undoubtedly lost many differentials in mud holes. If you observed those gears, you noticed that they meshed at a mechanical disadvantage, and when this mechanical error was corrected so that the gears meshed obliquely your trouble was over. Hence, as we lose our oblique angle we develop a mechanical disadvantage.

There is a surgical principle which is applicable to all fractures—approximation plus immobilization. You probably learned this when you were junior medical students. When applied to fractures of long bones, this principle gives results: however, with the intracapsular type of fractured hip, this principle embodied in our technic does not always give results because of the blood supply.

In discussing this subject there are several questions which come to my mind: What are these hip fractures? Why do we have failures and what are these failures? Knowing these failures, what is the best method of treatment?

Anatomically, there are two types of hip fractures, the intracapsular and the extracapsular. and each requires an entirely different evaluation. A subcapital or high cervical fracture is entirely intracapsular. A low cervical fracture can be extracapsular behind and intracapsular in front, insuring a better blood supply than the subcapital type. In the trochanteric type of fracture the blood supply to the femoral head is not impaired to any great extent. These two types are scarcely an inch apart, yet they require an entirely different evaluation because of the blood supply.

There are three reasons why we have failures in the repair of intracapsular fractures; namely, inaccurate reduction, inadequate fixation, and dis-

turbance in the blood supply to the head and neck of the femur.

Reduction must be accurate in an intracapsular fracture because the head of the femur is deprived of the major portion of its blood supply. Accurate reduction is necessary for revascularization of the head. Immobilization must be absolute; any motion which is exerted as a sheering action may be sufficient to prevent the delicate process of reformation of the capillaries across the fracture site from neck to head. The third and most common cause of nonunion is the disturbance of the blood supply. The subcapital fracture in elderly persons eliminates the entire blood supply to the head of the femur except that furnished through the artery in the ligamentum teres; this artery in old people is often sclerosed and not sufficiently patent to insure viability of the head, yet an aseptic necrosis does not always develop, which indicates that there must be a regeneration of blood vessels across this fracture line. Hence, blood vessel regeneration presupposes accurate reduction plus adequate fixation to protect these delicate vascular buds which spread across the fracture line.

Failures in the trochanteric type of fracture are not a question of blood supply, since it is not impaired. Our failure in obtaining bony union is due to either inaccurate reduction or inadequate fixation, or both. The manifestation of these failures might be an aseptic necrosis of the head of the femur, a cartilaginous union, a severe coxa vara with a short leg, or an otherwise disabled patient.

Knowing the reasons for failure and nonunion, the treatment must be directed toward the elimination of these causes. The reduction of the intracapsular type of fracture is best accomplished by the Leadbetter method—flexion of thigh to ninety degrees traction with internal rotation and abduction.

Prior to 1931 when Smith-Petersen published his reports on internal fixation with the nail, our best method was the Whitman abduction cast. This method gave us a bony union in 50 per cent of the cases with a mortality rate of about 25 per cent. The grief of embodying an elderly person in a body cast for months oftentimes disturbs that delicate metabolic balance and swings the pendulum the wrong way. The results obtained by the method of internal fixation have given us a higher percentage of bony union (80 per cent) and a lower mortality rate. Internal fixation cannot and does not restore the damaged blood supply to the head of the femur. It can and does immobilize the fragments, however, so that the newly formed buds are not sheered off as rapidly as formed. I believe the consensus of opinion among surgeons doing this work favors the Smith-Petersen nail in the intracapsular fractures, because this method insures fixation and absolute fixation favors the blood regenerative processes across the fracture line. Ten years of experience with this nail have proved a higher percentage of bony union, a lower mortality rate, and much comfort to the patient.

There are certain contraindications to the use of the Smith-Petersen nail in trochanteric fractures. Certainly a comminution precludes its use. A thin lateral cortex might not hold without the additional Thornton femur plate. These trochanteric fractures have a good blood supply and our results are good with any method which affords immobilization. The advantage of nailing trochanteric fractures is to allow the older patients out of bed, which reduces the mortality rate. Another advantage is that fixation and immobilization with the nail relieves the pain.

Internal fixation has yielded spectacular results with intracapsular fractures. This treatment applied to trochanteric fractures merits an entirely separate evaluation. In spite of its anatomic proximity, the trochanteric fracture differs from the intracapsular lesion in a most important respect; that is, its consistent favorable response to conservative therapy. Dissatisfaction with conservative therapy is not based upon unsatisfactory local results but upon the high mortality rate which characterizes this fracture. Such a fracture is slow to heal and requires a minimum of eight to twelve weeks before it is firm enough to permit discontinuation of the immobilizing apparatus. Internal fixation of trochanteric fractures is not concerned with the question of nonunion. Surgical intervention is employed to decrease the period of inactivity and thus avoid its hazards.

Key attributes the high incidence of fatalities from trochanteric fractures to the fact that the average age of these patients is considerably higher than that of patients with intracapsular fractures of the hip. The etiology of these two fractures is different. A sudden thrust upward of the femur can break the neck, whereas a trochanteric fracture is a more violent injury associated with greater shock and hemorrhage.

CONCLUSION

1. Internal fixation of intracapsular fractures is universally accepted as the best treatment, since it has evidenced bony union in 80 per cent of the cases and has lowered the mortality rate.

2. Internal fixation of trochanteric fractures is not concerned with the question of bony union. Surgical intervention is employed to decrease the period of inactivity and thus avoid its hazards.

3. Good results in fractures of the hip, intra-

capsular and trochanteric, presuppose complete and accurate reduction plus good nailing.

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THE RECURRENCE OF SCURVY*

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Scurvy has been a medical curiosity for the past two decades. The author saw but one instance of this disease between 1927 and March of 1941. At this time it seemed suddenly to reappear, and in twelve months' time there occurred six established or presumptive cases of scurvy in his practice. It was because of this apparently sudden reappearance of a disease which had practically disappeared that it seemed useful to call attention to the subject. There appears to be a general recurrence of interest in this condition, since literature on the subject has increased considerably. No attempt will be made to review the literature on a subject so well known to this group, but reference to a few selected articles seems timely. Since we are at war, a reference to scurvy as a military hazard is also of interest.

Major Victor Levine,[1] writing of the early sailing-vessel days, stated that scurvy killed more sailors than all other causes combined, including naval warfare. He quoted Sir Richard Hawkes as having lost 10,000 men with scurvy within his own experience.

In our Civil War there were 30,714 cases of scurvy, although the cause had long been known. During the World War, 7,500 men in the East Indian troops were lost to active duty in nineteen weeks during the summer of 1916. In the troops of the United States there occurred only five cases in 1917, and fifteen cases in 1918.

It must also be remembered that scurvy has a marked effect on the healing of wounds. Lund and Crandon[2] found that at the end of three months on a scurvy producing diet, there was no interference with wound healing. Healing, however, failed to occur after six months on such a diet. The scurvy was promptly relieved and wound healing occurred normally when the patient was given one gram of ascorbic acid each day.

One of the most interesting articles on this subject is that by Follis,[3] who reports three children who died apparently from acute cardiac insufficiency. Two of the children had right-sided cardiac hypertrophy; and no cause of death was found except the scurvy. He noted that sudden death from slight exercise was reported by officers of sailing vessels when scurvy was present, and stated: "This is an important contribution, since it may suggest a solution for the cause of sudden death which has in the past been attributed to



Fig. 1. Patient No. vi; rarefaction and osteoporosis of femora, particularly at epiphyses.

'Statis Lymphaticus'; scurvy is most frequent in the age group in which sudden unexplained death is most often seen."

The diagnosis of this condition may, or may not, be difficult. The characteristic position of the child with active scurvy is significant. The thighs are flexed and widely abducted; the legs are slightly flexed on the thighs. The patient prefers to lie on the back. There is acute pain on handling. The patient lies very quietly when undisturbed. Other signs are hemorrhage about the teeth if the scurvy is of long standing. There is often erythema, which may be nodular and is usually of the lower extremities. X-ray examination shows periostitis during the acute stage if the condition is of sufficiently long standing, and shows the laying

*Presented before the Iowa State Pediatric Society, Des Moines, April 14, 1942.

down of new bone during the healing process. This new bone is later reabsorbed.

Laboratory tests show a lowering, or an abscence, of ascorbic acid in the blood and urine. The following may be given as standards in the blood: One milligram per cent, or more, the patient does not have scurvy; 0.5 milligram per cent is borderline, and it is possible that the patient may have scurvy; below 0.5 milligram per cent is low, and the diagnosis is probably scurvy. If the x-ray is negative and the ascorbic acid is low, or the test is not obtainable, it may be necessary to resort to the therapeutic test. If the ascorbic acid is below 0.5 milligram per cent and the child responds rapidly to the administration of Vitamin C, one may make a presumptive diagnosis of scurvy.

Incidence: The incidence of clinical scurvy is apparently increasing. The incidence of subclinical scurvy is a much debated subject.

Treatment: The treatment is, of course, ascorbic acid, hypodermically or by mouth, followed by a diet adequate in Vitamin C.

CASE REPORT I

Present Illness: A white boy, eleven months of age, was admitted to the hospital October 28, 1941, with the complaint of painful, discolored nodules over legs, back, and head.



Fig. 2. Patient No. vi; roentgenogram one month later showing marked bony proliferation.

History: The patient was apparently well until two weeks prior to his admittance to the hospital when painful, bluish nodules developed over legs, back, and head, which increased in size and tenderness. The diet had consisted of evaporated milk, water, and karo syrup.

Physical Examination: The child laid in the characteristic position of one with acute scurvy. There was an area of redness about the upper incisor teeth. There were very tender nodules over the legs and, to a lesser extent, on the back and scalp. X-ray examination of the long bones was negative.

Treatment: Ascorbic acid.

Diagnosis: Probable scurvy.

Progress: Two days after admittance the child was much less disturbed by handling, and the area of redness about the teeth was less marked. On the fourth day after admittance the child moved about freely and did not cry when handled.

CASE REPORT II

Present Illness: B. E., a child three years of age, entered the hospital on February 19, 1942, with the complaint of polyuria, polydipsia, and fretfulness.

History: The child had had marked polyuria and polydipsia for some time and had been cross and fretful for one week. The diet had consisted of stew, bread, one to two glasses of milk daily, and a few cooked vegetables. There was no fruit or raw vegetable, and no meat except a small amount in the stew.

Physical Examination: The child appeared malnourished. There were hemorrhagic nodules over the legs, and marked tenderness was noted on handling.

Diagnosis: Probable scurvy.

Progress: The condition cleared up in three or four days with proper diet and a large amount of orange juice. The polyuria and polydipsia were not apparent in the hospital.

CASE REPORT III

Present Illness: S. H., a white boy seven months of age, was admitted to the hospital with the complaint of red, painful nodules on the legs and swelling of the legs.

History: The patient was said to have been well until the day before admittance. (This was probably an incorrect statement by the attendant.) The diet had consisted of breast milk and some cooked, soft food.

Physical Examination: There were red, painful nodules over the legs, and the feet and legs were swollen. The teeth and gums were normal. Lab-

oratory tests revealed 0.57 milligram per cent of ascorbic acid in the blood.

Diagnosis: Scurvy.

Progress: The condition disappeared after the child had been given a large amount of orange juice.

Case Report IV

Present Illness: J. S., a white girl nine and one-half months of age, was admitted to the hospital on November 21, 1941. The child was tender

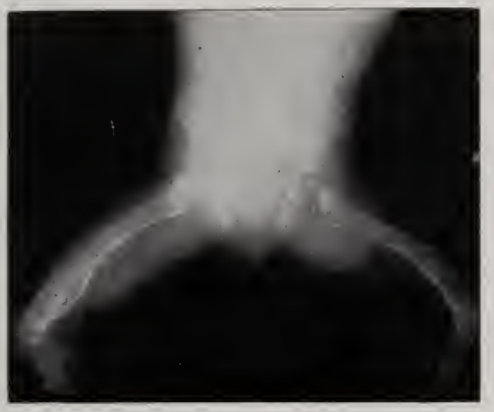


Fig. 3. Patient No. vi; roentgenogram showing initial absorption of the new bone formation after five months of treatment.

when handled and there was pain on moving the legs. The patient laid perfectly still if undisturbed. The child was brought in by a social worker and no dietary history was available.

Physical Examination: The patient laid in the characteristic position of one with scurvy; the legs were swollen and painful on motion; there was no crepitation.

Diagnosis: Scurvy.

Progress: The child refused treatment and was taken to another hospital in a few days where the diagnosis of scurvy was confirmed.

Case Report V

Present Illness: J. M., a white girl eight months of age, entered the hospital on July 2, 1941, with the complaint of pain on movement of the legs. The body was covered with a red rash.

History: There was pain on movement of the legs, which had begun two weeks previous to the time of admittance to the hospital. The child had lost weight and had been very cross. She had not had fruit juices or vegetables.

Physical Examination: The child laid in the characteristic position of one with scurvy. The legs were painful and tender. X-ray examination revealed a slight periosteal hemorrhage in the left leg.

Diagnosis: Scurvy.

Progress: The condition cleared up promptly with ascorbic acid.

Case Report VI

Present Illness: Y. J., a child eight months of age, was admitted to the hospital on April 14, 1941, with the complaint of painful, swollen thighs.

History: The baby had been born in a boarding house and three days later had been taken to a foundling home. The baby had had no illness. The attendant reported that the child had cried on being handled for several days. The day before the child entered the hospital the legs were noted to be swollen and very painful on motion. On admittance the legs were more swollen, especially about the knees, and were very painful on motion. The gums bled slightly on stimulation. The back was a little stiff. The hands and wrists were normal. The child had always been rather difficult to feed, had vomited orange juice often, and frequently had refused it entirely.

Physical Examination: There was marked swelling and tenderness of both thighs. On palpation there was a crunching crepitus in the distal third of each femur. There was no swelling of



Fig. 4. Patient No. vi; roentgenogram revealing further bone absorption after eight months of treatment.

the extremities below the knees and none in the upper extremities. The back was more rigid than normal. There was considerable swelling of the gums, which bled on manipulation. X-ray examination revealed early scurvy.

Diagnosis: Scurvy.

Treatment: Ascorbic acid, 100 milligrams each day.

Progress: On the third day in the hospital the patient's legs were swollen and painful, but there was less crepitation in the knees than formerly. The next day the knees did not crepitate. The legs and back were still stiff and painful. On the seventh day the legs were still swollen but less painful and tender. The child's legs were less swollen on the eleventh day, and there seemed to be no pain on motion or palpation. Eighteen days after entering the hospital, the child was comfortable, there was no pain or tenderness of the legs, but there was still some swelling present.

COMMENT

Although the foregoing reports were not all of cases which were proved to be scurvy, they are sufficient to call our attention to the fact that this disease is still in our midst and that we must continue to stress protective foods to the laity.

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MINIMAL CRITERIA OF CORONARY DISEASE

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In 1912 Herrick published his epochal article on coronary occlusion in *The Journal of the American Medical Association.* Since that date the topic has inspired an ever-expanding literature. Herrick emphasized the fact that occlusion could often be diagnosed at the bedside and that recovery from the attack was frequent. Advance in cardiac diagnosis has followed the conventional progress in other fields. It has evolved from decisions based on the cruder symptomatology with typical findings to a diagnostic attitude which searches for the mildest danger signals of coronary obstruction. It would be unduly optimistic to say that all cases can be diagnosed at the bedside and grossly pessimistic not to say that coronary disease may be suspected on symptoms which omit much of the typical picture. Finally, it must be admitted that many will die of coronary disease who appeared healthy and whose deaths could not have been anticipated by the most searching examination.

Coronary occlusion commonly exhibits pain, shock, and dyspnea. A case in which the patient has at no time shown either pain or dyspnea would seem to deserve comment, and to me the case well illustrates how readily a coronary lesion may be suspected if data are available from preceding events.

CASE REPORT

Present Illness: M. A., a white man 52 years of age, was first seen February 15, 1942, complaining of vertigo.

Past Medical History: Irrelevant except for a hypertension and albuminuria dating back four years.

Physical Examination: The patient was six feet tall and weighed 226 pounds. The blood pressure was 200/120. The heart dulness extended to the nipple line, and there were no murmurs. The pulse was 60 per minute and was regular. The urinalysis disclosed a few granular casts and showed albumin plus 2. A concentration test revealed the specific gravity was 1.018 and 1.020. Fundus examination showed slight narrowing of the retinal artery, a few areas of angiospasm, and a small retinal exudate in the right eye.

Clinical Diagnosis: These findings seemed to justify a diagnosis of obesity, hypertension, cardiac hypertrophy, and chronic nephritis without edema.

Treatment: The patient was placed on a conservative reducing diet which caused a loss of twenty-one pounds in seventeen weeks.

Subsequent Course: The patient was next seen June 22, 1942, when he was suddenly stricken with nausea. Twenty minutes after the onset he was pallid, sweating rather freely, and showed marked cyanosis of the nails. There was neither pain nor dyspnea, but he did note a sense of constriction in the left arm, which was considered a pain equivalent. The blood pressure was 150/90, showing a drop too marked to be attributed to his reducing program. Against his urgent protest he was taken to the hospital in an ambulance. There was a leukocyte count of 14,000 the first day and 22,000 twenty-four hours later. A low grade fever was noted for the first time on the second day and continued for eleven days, with a high point of 101.2 degrees. The pulse varied from 60 at the time of the attack to a high of 84. Extrasystoles were noted the second day. The cyanosis promptly responded to oxygen treatment. On the fourth day he was transferred to the Veterans Administration in Des Moines. I am indebted to the medical staff there for the data which follow:

"Electrocardiographic report, June 26, 1942: Rate: auricular 74, ventricular 74. Rhythm, sinus: regular. Left axis deviation marked. Conduc-

tion: PR interval .16; QRS .08. P waves: P 3 inverted. QRS complexes: QRS 1 normal; QRS 2 diphasic, med. Q; QRS 3 deep Q; QRS 4 normal. T waves: T 1 and 4 normal; T 2 and 3 inverted, high take off. ST intervals: Q-T-3 elevated. Chest lead: CF normal. Conclusion: Acute coronary occlusion; posterior myocardial infarction.

"Electrocardiographic report August 7, 1942: Auricular and ventricular rate, 60. Rhythm sinus: regular. Axis deviation, left. Conduction: PR interval .16; QRS .05. P waves, normal limits. QRS complexes: 1 normal; 2 diphasic Q wave; 3 deep Q wave; 4, normal limits. T waves: 1 normal, 2 and 3 inverted; 4 high voltage. ST interval normal. Chest lead: CF4 large T waves. Conclusion: Recent coronary occlusion with posterior myocardial infarction. Compared with tracing of June 26, 1942, slight improvement is noted, particularly in lead 3. X-ray examination shows mild cardiac enlargement. Sedimentation rate 18 millimeters each hour. Blood Wassermann, negative."

COMMENT

It is axiomatic that the patterns in coronary disease may vary widely; otherwise there would be little difficulty in diagnosis. Painless attacks are by no means uncommon, but if the literature on this subject is to be trusted, cases which show neither pain nor dyspnea are rare. Herrick[1] suggests that most painless cases are found among those whose myocardium has been rendered insensitive by preceding small infarcts. White[2] reports a series in which there was precordial pain alone without fever or leukocytosis. They were interpreted as occlusion of small branches and adequately treated by a short rest period. Levine[3] states that there may be no alteration of blood pressure and that the clinical picture may be that of heart failure without pain due to its slow development. Boyd[4] reported one-third of 127 cases were painless while Kennedy[5] asserts that a careful history reveals no more than 4 per cent are without pain. Saphir and others[6] state that severity and duration of the pain are not reliable guides. Dyspnea may be the only symptom. East[7] cites seven painless cases, of which each patient had dyspnea. Stated in other terms in well authenticated cases, all of the following symptoms and laboratory findings may be lacking: pain, fever, leukocytosis, lowered blood pressure, friction rub, dyspnea, and nausea. Obviously, all are not lacking in any one case. White[2] states that diagnosis was made much easier by records compiled on some patients in periodical health examinations.

In this case a systolic blood pressure of 150 would have carried little weight had the patient not shown a pressure of 200 four months earlier. From the reports it would seem that some degree of shock is to be expected in even the mild cases; its presence in patients past middle life, when not otherwise easily explained, should arouse suspicion. Brief attacks of dyspnea as well as complaints of fainting spells and acute indigestion are also significant. It is justifiable to over-diagnose a case in which there is the slightest suspicion of a coronary attack until the time when the electrocardiograph and other clinical data resolve the doubts.

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GENITAL PROLAPSE*

Robert M. Collins, M.D., Council Bluffs

Careless application of terms to lesions which are similar has often resulted in confusion of nomenclature and errors in treatment. I shall consider etiology and treatment in their broader aspects, and the differential diagnosis, of a group of gynecologic conditions which most frequently confront the general practitioner of medicine. This group consists of the following conditions: a low perineum, rectocele, cystocele, elongation of the cervix, and uterine prolapse.

The etiologic factors are two: congenital tissue weakness, which is actually an insufficiency of the fascial supporting structures, and trauma, which is usually caused by childbirth. In most patients a combination of both factors is responsible.

A low perineum may be the result of either muscular or fascial relaxation or an unrepaired laceration. In examining a patient with a low perineum the examiner notes that the actual perineal body is insufficient, the orifice is gaping, and the vaginal orifice accommodates the two examining fingers with unusual roominess; rectal examination with pressure upward and outward shows little depth or height to the perineal body. The terms commonly applied to this condition are low perineum, lacerated perineum, perineal insuffi-

*Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.

ciency, and relaxed outlet. Repair is directed toward increasing the height and depth of the perineal body, thereby restoring it to its original efficiency for its rôle of support.

An entirely different entity, but one which is commonly found in conjunction with an insufficient perineum, is a rectocele. The only similarity between these two conditions is that they have the same etiology and they both involve the posterior vaginal wall. Pathologically, a rectocele is an insufficiency of the fascia lying between the posterior vaginal wall and the anterior rectal wall. It is common to both and usually involves an area higher in the vaginal tract than the perineum. As a result, intra-abdominal pressure from straining and lifting is transmitted to the pelvic diaphragm, producing a bulging of the posterior vaginal wall and carrying with it the anterior rectal wall.

Since a low perineum and a rectocele commonly occur together, they should be repaired together. That repair includes two definite steps: measures to correct the rectocele and a perineorrhaphy. A perineorrhaphy, regardless of the skill with which it is performed, cannot do more than delay the progressive enlargement of a rectocele. I have seen many patients with well repaired perineums, behind which are large rectoceles which the patient can push down and over the perineum on straining. The fascia must be repaired in the area of the rectocele in order to effect a satisfactory surgical cure.

A cystocele is similar to a rectocele in etiology and pathology, but the term is applied to the anterior vaginal wall. It involves the anterior vaginal wall, bladder, and the fascia between them and common to both. Satisfactory repair must be directed toward the repair of this fascia. There is one exception, the Watkins-Wertheim interposition operation, which utilizes the uterus for support of the bladder instead of the ordinary fascial support. Objections to this type of operation for correction of a cystocele on the basis that it is neither physiologic nor anatomic are not borne out in practice, since in selected cases it often proves satisfactory.

Elongation of the cervix is often confused with uterine prolapse or may occur in conjunction with it. Its mechanism is primarily due to a cystocele and rectocele stretching the cervix by exerting traction below the insertion of the cardinal ligament. It can be diagnosed simply by determining the length of the cervix with a uterine sound. A cervix measuring three or four inches is not uncommon in this condition. Its correction is best accomplished by cervical amputation at the time of the cystocele and rectocele repair.

Uterine prolapse as a diagnosis is used incorrectly more often than any other in the field of gynecology. It is commonly misapplied to cystocele and rectocele, especially if the herniating masses are quite large and protrude from the vaginal orifice. As previously mentioned, this is also true of an elongated cervix. It is more apt to arise in this instance from failure to investigate completely rather than a misinterpretation of the structures involved.

Uterine prolapse, as the name indicates, is the progressive descent of the entire uterus into the vaginal tube. It may become complete, the fundus hanging below the level of the vaginal orifice. Contributing factors to the production of uterine prolapse are subinvolution, retrodisplacement, a cystocele or rectocele, and lacerations, but the actual mechanics involve the increase in diameter of the fascial collar formed by the cardinal ligament at the level of the internal os; this increase in diameter allows the uterus to drop further into the collar. The leverage caused by the descent and the progressively weakening cardinal ligament results in further increases in diameter with additional descent. Continuous operation of this vicious circle may result in uterine descensus of any degree. An existent cystocele or rectocele produces additional strain on the cardinal ligament, contributing to the rapidity at which the descent takes place.

Corrective procedures are all operative; vaginal tampons, astringent douches, bed rest, and various types of pessaries are all merely palliative. The two most popular operative procedures for the correction of uterine prolapse are vaginal hysterectomy, of the Mayo type, and the Manchester operation, which combines bladder advancement, cervical amputation, and a reconstruction of the fascial structures to duplicate the function of the cardinal ligament. Attention must be called to the fact that the vaginal hysterectomy is done not to remove a prolapsed organ but to allow a better repair of the remaining structures than would otherwise be possible. In other words, it is not the hysterectomy which cures the pathology incidental to the prolapse, but the more extensive repair which follows, made possible by the removal of the uterus.

A common type of operative treatment is the fixation of the uterus to the anterior abdominal wall, either directly or by various methods utilizing the round ligaments. Both methods are to be condemned. The round ligaments and the uterus consist largely of muscle with smaller amounts of connective tissue; both are capable of great stretching, which is evidenced during pregnancy when the round ligament stretches to eight or ten times its normal length and the uterus to a correspond-

ing degree. These are the weak links in the chain; stretching occurs and the prolapse returns. To combine these procedures with vaginal repair adds an unnecessary risk to the patient without contributing corresponding value in return. A common accompaniment of uterine prolapse of marked degree is a distention or gravity ulcer. It is not a true ulcer but is a splitting of the mucous membrane due to edema. It may be the cause of concern, not only to the patient but to the physician, because of the apprehension that the prolapse may be complicated by a carcinoma of the cervix. This combination is extremely rare; only fifteen to twenty cases have been reported in the world's literature. If the area is relatively clean, the repair need not be postponed. A week or two in bed with the prolapse reduced will serve to cure most of these patients without additional treatment.

Discussion

Dr. Addison W. Brown, Des Moines: In discussing the subject of genital prolapse, it is well worthwhile to emphasize certain salient points concerning the rôle of vaginal hysterectomy in the management of prolapse of the uterus. In most cases, the factors responsible for the prolapse, such as repeated pregnancies, a poorly conducted first stage of labor, the tearing incidental to operative deliveries, and congenitally weak fascial structures, are well understood. These factors, in addition to the atrophic changes induced by age, initiate a fraying out or a weakening of the pelvic fascia which supports the vagina and uterus and eventually results in a prolapse of these structures. In order to obtain a reasonably satisfactory operative result in cystoceles and rectoceles, and incomplete and complete prolapse of the uterus, it is essential to reconstruct or to reestablish the integrity of these supporting pelvic tissues. The vaginal removal of a prolapsed uterus without an adequate repair of the vaginal walls and underlying fascia is unsatisfactory because the pathology responsible for the prolapse has been left uncorrected. Many of these patients subsequently return with large cystoceles, rectoceles or a prolapse of the vagina. Vaginal hysterectomy with repair of the vaginal walls is an excellent method of treatment for the patient who has a prolapse, and who in addition has excessive vaginal bleeding or small fibroids, or some other condition which justifies the removal of the uterus. In conditions where there is no indication for removal of the uterus, the Fothergill method, the interposition, or the Le Fort colpocleisis would be the procedure of choice.

Dr. Cecil W. Seibert, Waterloo: Dr. Collins has given us a clear, understandable discussion of genital prolapse and allied conditions. He has pointed out several pitfalls in the surgical correction of this condition. I agree heartily with his statement that it is practically never necessary to perform a laparotomy to correct genital prolapse. The old "Lap and Vag", consisting of some form of round ligament suspension, followed by a simple perineorrhaphy, has not stood the test of time.

Uterine prolapse of marked degree, as we all know, is apt to occur in the elderly woman. These patients are frequently poor operative risks and their management is a problem, since pessaries and tampons are extremely unsatisfactory. It is in this group of patients that the Le Fort colpocleisis finds its greatest field of usefulness. Its only drawback is the elimination of further sex life, but in these patients this is not a serious objection. This procedure can, and should be done under local anesthesia. It does not cause shock, even to an elderly patient who is in poor general condition. The patient can be up the day following the operation, which eliminates the danger of hypostatic pneumonia. The end results are excellent; and, if properly performed, this procedure results in an almost 100 per cent rate of cure. I believe that if this method of treatment were followed more often many patients who are classified as inoperable could be cured and relieved of much discomfort in their declining years.

INGUINAL HERNIA*

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The treatment of inguinal hernia is still one of our greatest surgical problems. The recurrence of this condition is much too frequent. There are two factors in the successful treatment of inguinal hernia: the skill of the surgeon and the cooperation of the patient during the postoperative period, as well as his ability toward wound healing.

Factors of importance in the surgical technic, regardless of the type of suture used, are that the sutures should not be tied too tightly in order to insure against strangulation of the tissue; and sepsis, as in all operative procedures, should be guarded against, because in the presence of infection catgut sutures are absorbed much more rapidly. It is also important to avoid carelessness in tying the sutures to control bleeding, since this is frequently followed by unnecessary hematoma, which inhibits wound healing.

The patient's part in wound healing is of great importance. The obese person has always been a problem, and reduction in weight should be required before herniotomy is attempted. The large amount of preperitoneal fat makes it difficult to suture the muscle and fascia layers in satisfactory apposition. Another important factor is the individual's ability to develop scar tissue. A good demonstration of this is the observation of the healing of skin incisions. The person whose skin wound heals with a fine line does not develop as much fibrous tissue as the one who has varying

*Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.

degrees of overgrowth of scar tissue; what takes place in the skin also occurs in the deeper tissues.

Reports concerning the sutures used in herniotomies show that better results have been obtained from the use of materials which will not absorb, such as silk and wire, than with absorptive sutures. In regard to the absorptive sutures such as plain and chromic catgut, observations have been made that there is more reaction around plain catgut in tissue than there is around chromic catgut. There is considerably more round cell infiltration around plain catgut, which inhibits the development of fibroblasts. The catgut used should be a small size; a number 1 or 2 has sufficient strength and it is not necessary to use a larger size which causes more tissue reaction. The larger sizes absorb just as fast as the smaller sizes.

For several years certain types of hernias have been treated with the injection of sclerosing solutions. I think this is a wonderful practice in some instances, but in my limited experience I have not been successful in all attempts to cure inguinal hernias by the injection method. Certain authors have advocated giving fourteen to sixteen injections in the cure of hernias. I have found, however, that many patients need more injections to effect a cure, and even when I think I have a cure there are some recurrences. It does not take much pressure for the small opening that is allowed to remain in the sac to start enlarging and ultimately have a true recurrence. However, I do not condemn the injection treatment entirely. I do believe that if the individual is given a sufficient number of injections and if fibrous tissue develops readily from the sclerosing solution, the cures are possible; but I do not know how many years they will hold up. The success of the treatment also depends upon the willingness of the patient to wear his truss twenty-four hours a day every day.

I have thought for a number of years about the combination of the operative procedure plus the injection treatment for the cure of inguinal hernia. Tests have shown that the sclerosing solutions, whether tannic acid or sodium psylliate (sylnasol), will develop fibrous tissue rapidly. Therefore, if in operating upon a hernia the surgeon will dispose of the sac and make the usual repair, good healing should take place. However, I have not yet had the nerve to try this procedure.

In 1940 Wilmoth[1] stated his hernia repair was performed in the ordinary fashion, transplanting the cord. After the conjoined tendon is sutured to Poupart's ligament, five cubic centimeters of a sclerosing solution is injected beneath the suture line; after the aponeurosis is sutured, another five cubic centimeters of the solution is injected beneath the suture line. Fine silk sutures are used throughout. Two weeks after surgery, before the patient leaves the hospital, another five cubic centimeters is injected about the external ring, a procedure which is repeated in thirty days.

Wilmoth stated that in the four year period previous to this article, he had used this technic in the repair of 106 hernias, fourteen of which were recurrent hernias. In the follow-up of these cases only 37 per cent of the patients returned for examination, and in this number there were no recurrences. Since the appearance of this article, I have used a somewhat similar practice in the repair of inguinal hernias.

After disposing of the sac and transplanting the cord, the conjoined tendon is sutured to Poupart's ligament with interrupted number 1 or 2 chromic catgut, a ribbon of the inner or upper flap of the external oblique muscle is split down to the spine of the os pubes and then used as continuous suture through the conjoined tendon and Poupart's ligament and anchored with silk sutures. Since these tissues have been previously approximated with the interrupted chromic catgut sutures, there is no tension on the fascia suture, which is very important because fascia sutures should not be placed under tension. Before the first sutures are placed in the conjoined tendon and Poupart's ligament, a flexible blunt canula is placed in the inguinal canal with the base at the internal ring. After the previous sutures are placed, five cubic centimeters of sylnasol is injected beneath the suture line as the canula is gradually withdrawn. Most of the solution stays in the space below the suture line but occasionally some works up around the sutures. Do not sponge the wound at this point; allow any escaped solution to remain in the wound. Suture the flaps of the fascia of the external oblique muscle beneath the cord. The skin is closed in the usual manner.

I have experienced no complications in patients with hernias which I have repaired in this manner. In two or three instances I have noticed that some patients complain of increased peristalsis the first two days but have been able to expel the flatus freely.

I do not contend that this surgical procedure is the best repair for the cure of inguinal hernia, but I am interested in the combined use of sclerosing solutions plus surgical repair and wish more men would give it a trial with whatever surgical repair they might follow in the treatment of inguinal hernia. I believe it to be a sound procedure and hope it will tend to diminish the present number of recurrences in the operative treatment of inguinal hernia.

Although Wilmoth gives a second and third injection of the sclerosing solution, I feel that some

patients might complain of the added discomfort; and if the original five cubic centimeters of solution is properly placed on the top of the peritoneum and beneath the conjoined tendon and Poupart's ligament, sufficient fibrous tissue will be formed to hold the repair. In patients with larger inguinal hernias, I believe another five cubic centimeters of sylnasol should be used in the space above the conjoined tendon and below the fascia of the external oblique muscle.

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THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

FRACTURE OF THE NECK OF THE FEMUR FOLLOWING IRRADIATION FOR CARCINOMA OF THE UTERUS

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With the advent of higher voltage roentgen therapy and the increased total dosage which is usually given in a shorter length of time, the roentgenologist is confronted with the problem of injury to deeper tissues. In the past adult bone was generally considered resistant to irradiation, but since Baensch's[1] report in 1927 of a case of fracture of the neck of the femur following roentgen therapy, several reports from this country indicate this is not an uncommon complication of irradiation for pelvic malignancies. The following case is believed to fall in this category.

Case Report

Chief Complaint: The patient, a white woman 76 years of age, was admitted to the Finley Hospital September 30, 1940, with a complaint of a profuse, sanguineous, vaginal discharge which had begun only six hours before admission.

Family History: Irrelevant.

Past Medical History: The patient had suffered from hypertrophic arthritis for several years. Twenty-eight years prior to the time of the present admittance to the hospital she had had the gallbladder drained because of gallstones. A short time later she had had a uterine suspension. She had also had vague gastro-intestinal symptoms, and about four years ago a diagnosis of duodenal ulcer was made. This has been symptomless for one year. Two years ago she had an attack of acute arthritis of the right knee.

Present Illness: At 10:00 a. m. the patient had a profuse, sanguineous, vaginal bleeding and she was advised to go to the hospital for examination. She had no other symptoms.

Physical Examination: Aside from obesity, the general examination was not notable. The vaginal examination showed blood coming from high up in the vagina, but because of the previous uterine suspension the examination was unsatisfactory.

Subsequent Course: The patient was referred to a gynecologist in Chicago where, under gas anesthesia, a uterine biopsy was made with a resultant diagnosis of adenocarcinoma of the uterine fundus, grade 4. She was given intensive irradiation therapy with both radium and roentgen rays. Three months after the treatment she suffered severe pain in the right hip. A little later she began to have severe pain about the upper right chest and shoulder on movement or upon sneezing. Locally the carcinoma seemed cured and she returned home late in 1940.

Four months later she was readmitted to Finley Hospital because of the pain in the right hip and shoulder which had persisted. At that time metastases to the right humerus, ribs, pelvis and right femur were considered most likely. The x-ray examination of the ribs was negative. The pain in the right hip was ascribed to arthritis. Two weeks later, and because the pain in the right hip persisted, another x-ray examination was made and a diagnosis of fracture of the neck of the right femur was made. Since the fracture was in good position, she was treated at home with sand bags to support the hip. This relieved the pain and several x-ray examinations showed good healing and no evidence of metastases in the bone. However, the axillary metastases grew steadily and finally eroded through the ribs. A large mass was also felt along the abdominal aorta, and this grew progressively. The patient died thirteen months after the first symptom of uterine hemorrhage.

Final Clinical Diagnosis: Carcinoma of the uterus with metastases to the retroperitoneal and axillary lymph nodes and ribs; spontaneous fracture of right femur following irradiation; hypertrophic arthritis of the spine.

Autopsy Abstract

The body was that of a large woman who had lost considerable weight. A mass filled the right axilla, which on dissection was found to have completely eroded the second and partially eroded the third and fourth ribs and invaded the right pleural cavity. Metastases were also found in the right lung. The uterus and adnexa showed no neoplasm either upon gross or microscopic examination. A huge mass 15 centimeters in width extended from

the brim of the pelvis almost to the liver and had surrounded the abdominal aorta and vena cava. On section it was nodular and composed of soft gray to semiopaque tissue. In some areas there was well marked necrosis. Microscopically, all the metastases showed the neoplasm to be composed of undifferentiated large cells with hyperchromatic nuclei. Their origin would have been in doubt if it were not for the fact that they were exactly like those seen in the original sections from the uterus. The upper portion of the right femur was removed and showed a thin, silvery gray line representing the fracture which had firmly united. Microscopically, there were no metastases and the healing had been largely by connective tissue with a few areas of cartilage. A thrombus filled the left iliac vein, which microscopically was almost entirely composed of neoplastic cells.

Primary Anatomic Diagnosis: (1) Grade four carcinoma of the uterus; operation (biopsy); irradiation; metastases to the right lung, paravertebral and right axillary lymph nodes; erosion of ribs with invasion of the right pleural cavity. (2) Spontaneous fracture of the neck of the right femur with fibrocartilaginous union.

Subsidiary Anatomic Diagnosis: Arteriosclerosis; operative scars (cholecystotomy and uterine suspension).

COMMENT

One interesting feature is that, locally, the carcinoma of the uterus was apparently cured, since there was no gross or microscopic evidence of the neoplasm in the uterus or adnexa. The metastases along the aorta and in the right axilla were unusually large and composed of totally undifferentiated cells, the origin of which would have been in doubt without the record of the uterine biopsy which showed the same histologic picture. Pain preceded the discovery of the fracture of the femur by several weeks, and there was no history of trauma. While the first impression was that the fracture was the result of metastases, none were found in sections taken from along the fracture line. They showed a fibrocartilaginous union of the fracture without evidence of other disease.

GENERAL DISCUSSION

The reported incidence varies possibly because the lesion is not detected or is misinterpreted in some clinics. The investigators at the University of Michigan Hospitals first called attention to this lesion in 1935[2] when they reported nine cases which occurred between July, 1931, and July, 1934, an incidence of 1.9 per cent in 471 patients with pelvic malignancy. One year later in a revised report they[3] found a total of 14 cases in their records. In 1939 Peck[4] collected a total of 28 cases found between July, 1931, and January, 1938, in a series of 1,026 pelvic malignancies. Strauss and McGoldrick[5] in a general review of the subject in 1941 were able to collect 55 cases including those listed above and added four cases of their own. This would indicate that, while not common, the lesion is sufficiently frequent to deserve serious consideration when irradiation for pelvic malignancy is contemplated.

The etiology of spontaneous fracture of the femoral neck in pelvic malignancies varies in different cases. The most common etiologic factor is bone metastases, but a nutritional defect characterized by demineralization is important in some cases. More or less complete obliteration of the arteries supplying the femoral head, which may result from aging or from the effects of irradiation or both, are also important factors. This is especially true of irradiation through the lateral ports in which the head of the femur and its blood vessels receive the greatest dosage of the rays. The bone changes have been reported by Bugher[6] as follows: "The bone of the entire region shows marked osteoporosis. The trabeculae are narrowed and irregular with a marked increase in the volume of fatty marrow. The density of calcification has been diminished so that the bony structure not only is less substantial quantitatively but also is inferior relatively. In the neck, where this process is most marked, there is a zone of dense connective tissue increase marking the fracture line. Here there is extensive obliterative sclerosis of the nutrient blood vessels and the callus itself is practically avascular. In the dense connective tissue we found many minute fragments of necrotic absorbing bone. Throughout the fracture region there is an entire lack of osteogenesis; instead the picture is one of progressive bone absorption and fibrosis."

The symptoms of this condition usually appear several months after treatment of the pelvic malignancy and they are mild. Only in very rare instances is there a history of trauma, and in the majority of reported cases pain is the only complaint. This symptom often antedates the discovery of the fracture.

The treatment of the fracture must be individualized and may depend to a large extent upon the ultimate prognosis of the malignancy. Recognizing that callus formation is unlikely and that most cases heal by fibrous union, sometimes with a fairly good functional result, only the simplest procedures need be carried out in some instances. In other cases in which the femoral head may retain its normal calcium, internal fixation may give a fair percentage of good end results. Prevention by omitting the lateral ports during irra-

diation is probably the most logical procedure. As Strauss and McGoldrick conclude: "The small increase in depth dosage via treatment through lateral ports does not justify the added risk. Also that dose of radiation even in prolonged, small, divided, dosages, by their cumulative action may produce serious injury even to a radiation resistant-resistant structure like bone. In repeating the cycle, the cumulative action must be carefully borne in mind."

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WAR SURGERY MEETING OF THE AMERICAN ACADEMY OF ORTHOPEDIC SURGEONS AND THE CLINICAL ORTHOPEDIC SOCIETY

At a time of national emergency, such as we now face, intellectual forces aptly adapt themselves to circumstances under which they must advance. Therefore, to fill the need for inspiration and information with regard to the war medical problem, the American Academy of Orthopedic Surgeons and the Clinical Orthopedic Society have combined their annual meetings to meet this challenge. This joint meeting will be held January 17 to 20, 1943, at the Palmer House in Chicago. The keynote of this occasion will be War Surgery and the application to civil practice. Those members of the medical profession in good standing, who are interested in bone and joint surgery and its allied fields, may have the privilege of attending.

There will be four sections of interest connected with this program: a clinical program; a general scientific assembly; an instructional section, with group discussion courses and motion pictures of surgical methods and technic; and scientific exhibits.

The speakers and faculty are drawn from the leading surgical authorities of this country, as well as distinguished guests from England, Canada, South America and the Hawaiian Islands. These will include a sizable group of Army and Navy Surgeons who have had to deal directly with the war casualties from across both oceans.

Thorough, concise discussion courses will be offered; and each will have an outstanding faculty, many of whom are in military service. The courses will include the following subjects: Surgery of the Hand; Fractures; Peripheral Nerve Injuries; Amputations; Lame Backs; Surgery of the Hip; Surgery of the Knee; Foot Disabilities; Differential Diagnosis of Bone Pathology; Reconstructive Surgery Following Trauma of the Upper Extremity; and Surgical Anatomy.

There will also be several special features in connection with the general program. An afternoon will be devoted to Complicating Trauma Associated with Orthopedic Casualties. This will include a discussion of the following subjects: Shock—Its Early Recognition and Treatment; Blast, Crush and Compression Injuries; Thoracic Injuries; Head and Spine Injuries; Gunshot Injuries to Abdomen; Injuries to Genito-Urinary Tract. One evening will be devoted to the subject of Chemotherapy in the Treatment of Wounds, with eminent authorities who have studied the subject from various angles. Another evening will be given to a debate on The Kenny Treatment for Anterior Poliomyelitis.

There will be no time for play. Morning, afternoon and evening will be devoted entirely to the problems as they have been outlined. As has been stated previously, members of the medical profession who are interested in such a program are welcome to attend, and may receive an invitation by writing to the Secretary, Dr. Myron O. Henry, 401 Medical Arts Building, Minneapolis, Minnesota. If you expect to attend, hotel and railroad reservations should be made early.

FIFTH ANNUAL CONGRESS ON INDUSTRIAL HEALTH

The fifth Annual Congress on Industrial Health, sponsored by the Council on Industrial Health of the American Medical Association, will be held Monday, Tuesday and Wednesday, January 11 to 13, 1943, at the Palmer House in Chicago. These meetings are open to physicians and others interested in industrial health. There is no registration fee.

During the course of the meeting a symposium on Infections in Industry will be conducted jointly with the Council on Pharmacy and Chemistry to include not only those of definite occupational origin but also others causing serious loss of time in industry, notably those affecting the upper respiratory system.

Another session of the congress has been assigned to industrial medicine and the emergency. Here recent experience in functioning with less well trained help, the possibility of using technicians and aides to a greater extent as replacements for more skilled people, more effective use of medical records as guideposts to needed preventive medicine and hygiene, and closer association between industrial medical facilities and those being set up for emergency medical care under the Office of Civilian Defense will be elucidated.

Innovations during this congress will be symposiums on Medical Relations in Workmen's Compensation, jointly presented with the Bureau of Legal

(Continued on page 38)

STATE DEPARTMENT OF HEALTH

Walter L. Bierring

RHEUMATIC FEVER IN CHILDHOOD

ROBERT L. JACKSON, M.D.
Children's Hospital, State University of Iowa
Iowa City

National attention is being directed toward the problem of preventing rheumatic heart disease. Rheumatic fever now stands out as the most serious disease which threatens American children, according to the statisticians and medical officers of the Metropolitan Life Insurance Company. They also point out that thousands of adults die or have extensive heart damage because of rheumatic fever in childhood. Although rheumatic fever is much less prevalent than it was thirty or even ten years ago, statistics show the need for still further reducing its incidence and mortality. Among children between ten and fourteen years of age, rheumatic fever causes more deaths than any other disease; among those between five and nine years of age it is outranked in mortality rate only by the aggregate of the four principal communicable diseases of childhood, and among those between fifteen and twenty-four years of age it is outranked only by tuberculosis.

Data with regard to incidence of rheumatic fever are not generally available. The disease is reportable in Iowa and a few other states, but little effort has been made in the past to encourage physicians to report their cases.

The cause of rheumatic fever is not yet completely understood. The acute phase of the disease usually follows upper respiratory infections, especially when they are due to beta hemolytic streptococci. However, the exact relationship between the streptococcus and rheumatic fever is not yet established. Many victims are found among the needy population where undernutrition, overcrowding, and unfavorable hygienic surroundings prevail, as well as in areas where there is a high incidence of upper respiratory infection.

Early recognition is difficult because medical advice often is not sought, and when the patient is seen the diagnosis is not easily made. There is no single diagnostic test which can be used in a case finding program. A complete history and physical examination are necessary to establish a diagnosis. Laboratory and x-ray facilities are desirable to establish the status of the patient with the disease. Rest in bed is indicated when there is evidence of active infection, and this type of care is frequently impossible in the child's home. This care usually can best be given in a sanatorium where specialized professional attendants can insure the requisite supervision.

Children who have had rheumatic infection usually have more than one attack and each attack increases the probability of heart damage. There is no method known for the specific prevention either of the initial infection or of the resultant damage. The prevention and control of the disease requires improvement in the health status of children by better nutrition and improved living conditions. The aim, therefore, must be to keep the child in good general health, including optimum nutrition and avoidance of exposure to infections both at home and at school. Every child who has a definite history of rheumatic fever should be encouraged to visit his doctor periodically regardless of whether or not there are any symptoms or signs of the disease. The purpose of this long time observation is to educate the patient and family in good health practices, to detect early signs of reactivation, to foster mental health, and to help plan for the future employment of the individual.

The physician will need the close cooperation of all the community resources to meet this serious public health problem. The county medical societies representing the practicing physicians should be the central organization about which any program of control is built. The patient should be given continuous medical supervision by one physician to avoid confusion and to maintain a patient-doctor relationship. Occasionally the family physician will desire to consult a pediatrist experienced in the care of children with rheumatic fever.

Facilities are now available for sanatorial care of a limited number of children with rheumatic fever under the supervision of the State Services for Crippled Children in the Pediatric Department of the University Hospitals. At the request of any physician, the State Services for Crippled

Children, Children's Hospital, Iowa City, Iowa, will be glad to help arrange for care of any child known to have rheumatic fever.

EDUCATIONAL CAMPAIGN AGAINST RHEUMATIC FEVER

An intensive educational program on rheumatic fever and heart disease has been launched by the Metropolitan Life Insurance Company with the cooperation and advice of the American Heart Association, the Academy of Pediatrics, and the Crippled Children's Division of the United States Children's Bureau. Beginning in the fall of 1942, the program is to be extended through the first half of 1943.

The purpose of this activity is twofold. Through popular literature, addresses, radio programs, news releases, and advertisements, an effort will be made to acquaint the general public with the newer knowledge of rheumatic fever and rheumatic heart disease. This phase of the program will stress the importance of early diagnosis, proper care for rheumatic fever victims, and the declining mortality rate among children in the younger age groups. The Metropolitan is using the services of its field staff in this activity. Through its representatives, who operate in some three thousand communities, the Company expects to reach over a million homes with information on rheumatic fever.

An equally important objective of this program will be to distribute to the medical profession up-to-date literature covering various aspects of the rheumatic fever problem. Included among the printed materials for physicians is a clinical booklet which sets forth in concise form the modern concept of the disease, criteria for its early diagnosis and treatment, methods of managing the disease and recognizing its cardiac involvements. This booklet is being developed in collaboration with special committees of the American Heart Association and the Academy of Pediatrics. The membership of these committees include: Drs. T. Duckett Jones, Arthur C. Degraff, Ann G. Kuttner, Edward F. Bland, Ethel C. Dunham, O. F. Hedley, Hugh McCulloch, Homer Swift, Stanley Gibson, and A. T. Martin.

This program marks the first time that a national educational campaign has been undertaken to reach the general public and the medical profession with rheumatic fever literature, especially prepared according to the needs and interests of each group.

REPORTING OF RHEUMATIC FEVER

The two articles which appear in this section of the Journal direct the reader's attention to acute rheumatic fever, particularly in relation to heart disease. The article entitled Educational Campaign Against Rheumatic Fever announces the beginning of a nationwide effort to inform lay and medical groups and to stimulate greater interest in community health aspects of rheumatism.

The article by Dr. Jackson, prepared especially for this section of the Journal, emphasizes the importance of acute rheumatic fever and the need for official reporting to health agencies of cases that come to medical attention.

Rheumatic fever (acute) has since 1927 been on the list of reportable diseases in Iowa. Closely related to organized effort at control is accurate knowledge regarding prevalence and seasonal occurrence of cases. In order that records may be of value, attending physicians are requested to report cases, notably those of recent onset, to district and county health services so that these offices in turn may forward reports to the State Department of Health. A satisfactory method is to employ the same individual report card as used in notification of the various communicable diseases.

PREVALENCE OF DISEASE

Disease	Nov. '42	Oct. '42	Nov. '41	Most Cases Reported From
Diphtheria	14	11	25	Woodbury
Scarlet Fever	203	174	166	Polk
Typhoid Fever	7	4	3	Winnebago
Smallpox	1	5	3	Cass
Measles	135	55	81	Polk, Washington, Woodbury
Whooping Cough	58	84	81	Dubuque
Brucellosis	27	25	45	For the State
Chickenpox	271	90	271	Woodbury
German Measles	11	4	2	Bremer, Dubuque, Story, Winnebago
Influenza	10	12	4	Boone, Clarke, Mahaska, Mitchell
Mumps	113	95	222	Humboldt, Story
Pneumonia	38	43	112	For the State
Poliomyelitis	6	16	4	Clinton, Madison, Story, Tama, Woodbury
Tuberculosis	29	73	52	For the State
Tularemia	3	0	5	Scott, Madison
Gonorrhea	111	156	82	For the State
Syphilis	210	274	179	For the State

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

LEE FORREST HILL, Editor.....Des Moines
DENNIS H. KELLY, Associate Editor.....Des Moines

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SUBSCRIPTION $3.00 PER YEAR

Address all communications to the Editor of the Journal, 505 Bankers Trust Building, Des Moines

OFFICE OF PUBLICATION, DES MOINES, IOWA

Vol. XXXIII JANUARY, 1943 No. 1

WE BEGIN THE NEW YEAR

It has been our custom for many years past, and we are happy again this year to extend to our readers the greetings of the season and our best wishes for a happy new year—and these sentiments we express with a considerably changed mental attitude over that of a year ago. Then the blow at Pearl Harbor had just fallen. Declarations of war which followed left few peoples on the globe uninvolved. Uncertainties as to the future weighed heavily on the minds of all thinking persons. The usual holiday expression of "Peace on Earth, Good Will to All Mankind," if uttered at all, certainly lacked much in sincerity. But in the year's time the picture has changed; over the distant horizon the first faint glimmerings of a new dawn are discernible. The darkness of night with its nightmarish spectres of democracy and freedom subjugated and ground under the heel of a tyrannical monster mad with the lust of world power and world domination has been dissipated. America has come through. She has come through in a way which brings pride to the heart of every loyal American. We are fully aware that a long bitter struggle still remains; nevertheless, we face the year 1943 confident that the American way of life will be preserved.

Today—at the beginning of a new year—as we pause for a moment of reflection, it comes home to us sharply that our medical colleagues are scattered to the four corners of the earth. Some, whom we were accustomed to greeting daily in the hospital corridors or cloakroom only a short time ago, are already in Africa or Guadalcanal or in other foreign ports; still others are but waiting orders which will take them to the scene of the conflict. But wherever doctors may find themselves on this day, whether abroad, at home, or on the military or civilian front, they are carrying on in the traditional way—quietly, uncomplainingly, efficiently. To these unsung heroes everywhere and to their loved ones whom they have left at home, we send our greetings and bid them all to be of good cheer, because the time is fast approaching when the bright sun of peace will once again flood the earth and, reunited, we shall resume our accustomed tasks.

Here on the civilian front we have gradually buckled into the harness and now are pulling the load shared by two or three of our confreres before. Our national meetings have been abandoned for the duration, but the importance of maintaining local, county, and state meetings has wisely been recognized. The advancements constantly being made by scientific medicine, even in wartime, are so rapid that cancellations of these meetings would be a calamity indeed. Few, perhaps, realize the disastrous consequences the absence of all medical meetings would have upon the medical publications of the country. The JOURNAL, for instance, was greatly concerned about its future when the question of holding our own state meeting in the spring was under discussion. If the meeting were not held, we should have had to depend upon volunteer contributions or upon papers prepared on invitation. To impose such a burden on our already overworked profession would have met with doubtful success to say the least.

Although we feel justified in assuming an attitude of optimism as we peer ahead into the misty future of the coming year, we are not unmindful of the serious problems with which we are confronted and with which we shall be confronted. First, the war must be won. We believe it will be won. As a people we have accepted and are accepting the minor inconveniences of the various rationing programs because we are convinced of their necessity. The general populace is exhibiting an amazing consideration toward the limited supply of physicians who are still available to care for their medical needs. It is entirely probable that some readjustment of physicians' services may have to be made between the military services, industrial plants, and the civilian population in certain areas or communities. Very likely the present supply of physicians who are still in private practice will be further depleted to meet the needs of expanding military forces. But, even so, we are confident that both people and physicians will meet these additional demands with the same fortitude they have shown up to the present time.

The past year was a difficult year—difficult because of the uncertainties we were constantly experiencing. But we are ready now on all fronts. We have taken in our stride all the restrictions

imposed upon our customary mode of living, and aside from a little justified grumbling here and there which quickly melts when comparisons are made with the hardships suffered by our boys abroad, we are a united, determined people. Whether the war will end in 1943 or not, no one can say; but whether it does or not, we believe there is no question but that the morale of the American people is on a much higher plane than it was at the beginning of 1942. And so, if New Years resolutions are to be made, let each of us resolve to do the best we know how the job which has fallen to our lot. Let's go, 1943!

PROCUREMENT AND ASSIGNMENT OUTLOOK*

There is little doubt but that there are two definite lines of thought prevailing among the medical profession of Iowa, and elsewhere, regarding the medical situation as it pertains to the conduct of the present war. The first thought is erroneous. Several physicians have expressed the belief that with the completion of the 1942 recruitment campaign there was nothing of consequence remaining for the Procurement and Assignment Service. The second prevailing thought is more to the point and contributes to the situation as it exists today. Many men are asking how the situation of the medical profession today compares with that of a year ago.

In the midyear of 1942, Iowa was assigned a definite quota of physicians as its contribution to the armed services for 1942, covering a period of eight months. We are happy to announce that she came through with a rating of 122 per cent of its prescribed quota.

It is no secret that the contemplated expansion of the armed services will be on a scale almost comparable to that in the past, and Iowa will again be called upon to furnish her portion of the required medical personnel. There are still present in Iowa well over two hundred physicians under thirty-eight years of age. Those in this class seem to comprise the ideal group for service. These physicians fall into one of four groups: First, those who at present are classified as essential since they are alone in their respective communities; second, those who are physically unfit; third, interns and residents in hospitals; and fourth, those who have failed to apply for a commission and who as yet have not answered to their draft boards.

In order that the armed forces may be provided with adequate medical manpower, Iowa communities are going to be called upon to make further sacrifices regarding medical service. The medical profession will have to make sacrifices by having some of its members relieve those who are physically fit and about to enter service for the duration of the war.

In order to cooperate with the National Procurement and Assignment Service and the heads of the various armed services, it was necessary that the State Procurement and Assignment Committee determine which doctors should be placed on the available list. On December 13 this Committee met in Des Moines and the Iowa situation was canvassed county by county. As a result, we now have a list of available physicians, either for the armed services or for the group who will be requested to dislocate themselves from their present locations and release an otherwise essential physician for the armed services. Relieving a doctor about to enter service is admittedly devoid of the pomp and glamour which accompanies a commission in the armed services. The contribution made by an individual who takes over for his colleague, however, is just as great as that of a man entering military service.

A situation which has occurred within our state has been that of physicians who were deemed essential to a community and who, after the younger men in that community left or were about to leave, departed for locations not only within the state but outside of the state as well; and in each

*From the State Procurement and Assignment Committee.

ALLOCATION OF PHYSICIANS

Dr. Frank H. Lahey, Chairman of the Directing Board of the Procurement and Assignment Service, has asked the Journal to publish the following notice:

"It is of the utmost importance that the Procurement and Assignment Service for Physicians, Dentists and Veterinarians, immediately has the name of any doctor who really is willing to be dislocated for service, either in industry or in overpopulated areas, and who has not been declared essential to his present locality. This is necessary if the medical profession is to be able to meet these needs adequately and promptly. We urgently request that any physician over forty-five years of age who wishes to participate in the war effort send his name to the State Chairman for the Procurement and Assignment Service in his state."

case the Procurement and Assignment Service was used as a cloak to conceal selfish personal motives. The cloak of hypocrisy was ripped off in each instance.

It is the hope of the Committee on Procurement and Assignment that the profession at large appreciates the functioning of the Procurement and Assignment Service; and the doctors may all be assured that in no instance is there the remotest intention of exercising personal prejudice.

We are appealing to the members of the medical profession of Iowa to cooperate with the State Procurement and Assignment Committee by attempting to carry out its recommendations and wishes and at the same time minimizing the probability of more drastic measures being applied by Federal authority.

Application papers for the army and also the physical examination authorizations can be issued by the chairman of the State Procurement and Assignment Committee. A certification of availability is all that is necessary for application for a commission in the Navy.

Every physician on the available list will be notified in Bulletin No. 5, and others will be told of their classification just as soon as it is made. Further information will appear from time to time in future issues of the JOURNAL.

CARCINOMA OF THE CERVIX

In the September, 1942, issue of the JOURNAL we commented in these columns on a study of eclamptic patients observed in the Department of Obstetrics and Gynecology at the University Hospitals in Iowa City. Another important study from this same source was published in the *Western Journal of Surgery, Obstetrics and Gynecology* in September, 1942. Dr. A. W. Diddle describes the "Errors in the Treatment and Management of Carcinoma of the Cervix" which were observed among 885 patients with this condition admitted to the University Hospitals between July 1, 1926, and January 1, 1942. In this group the surprising total of 152 patients was considered to have had inadequate or improper management prior to admission to the hospital. It was possible to complete follow-up records for a five year period for 107 of these individuals, among whom there were only eight survivors without recurrence.

In 37 patients hysterectomy was the only form of treatment instituted and this was delayed on an average of 7.9 months after the onset of symptoms. Thirty-three women of this group died from seven to 83 months after the operation. Four were alive one to eight years later, two of whom showed no recurrence.

Another common error was failure to do a vaginal examination and inspection of the cervix at the onset of abnormal vaginal bleeding. Frequently douches alone were prescribed with the result that much valuable time was lost before the real condition was recognized. Among 67 consecutive patients seen in 1941, an average of 2.4 months was lost from the time of first examination to the time of institution of adequate therapy.

Thirty patients had only radium therapy to the cervix, and six others received small doses of roentgen rays either with or without radium before admission to the hospital. In a group of 18 of these patients only two lived over five years, and one of these died from recurrence in the sixth year. The remainder developed severe cancer two to forty-eight months afterward. Cautery was used alone in another group of 14 patients, and cautery with radium or roentgen rays in four more.

Among another group of 29 patients, miscellaneous methods of treatment were used, including local therapy, oral medication, salpingectomy, amputation of the cervix, osteopathic treatments, and myomectomy. Nineteen of these patients had died two to 67 months after therapy. Among the remaining ten who were alive, seven had cancerous extensions, and only three five-year survivals were noted.

The author states in his summary that the more common types of inadequate treatment of cancer of the cervix include "such procedures as local treatments with douches, tampons, etc., cauterizations of cervix, amputations of cervix, subtotal and total hysterectomy, and treatment with inadequate doses of x-ray and radium alone, or combined."

In this day and age when the importance of early diagnosis and thorough treatment of cancer wherever it occurs has been preached from the housetops on all sides, it is disconcerting indeed to learn of such a relatively high proportion of errors as that reported in Dr. Diddle's publication. His paper should be of great value in stimulating more care in the proper and adequate therapy of this important class of cases.

WAR BOND AND STAMP SALES IN IOWA

Financing a war of the proportions of the present one is anything but child's play. In fact, the war bond and stamp sales program of the United States Government is the most gigantic money raising project ever undertaken by any country at any time. That it is achieving its present success

is not by accident, but on the contrary it is the result of careful organization and hard work on the part of a good many people. We were interested in knowing the part Iowa is playing in this gigantic undertaking and asked the state administration to furnish us with a few pertinent facts. Below is a summary of what we were told.

From the beginning our Government has believed that its citizens would voluntarily provide the money necessary to supplement tax funds and regular government borrowing. But in spite of the obvious appeal of patriotism and sound investment, war bonds do not sell themselves. In order to persuade the maximum number of individuals to invest their savings and a portion of their current income in war bonds, an organization known as the War Savings Staff was set up as part of the United States Treasury Department. Each state has its War Savings Staff manned by a few full time workers whose job it is to enlist and direct a large force of volunteers. Some 30,000 of these minutemen have spent endless hours contacting, educating and soliciting every family in Iowa. In addition, there is a State Women's Division of the War Savings Staff with women in every county organized to supplement the program, chiefly by educating women to support the family buying. Several hundred women in Iowa are finding this endeavor a strenuous and absorbing form of war work. In addition to the efforts of these thousands of individuals, such groups as the retailers, theater owners, bankers, broadcasting companies, and the press have contributed unstintingly of their time and facilities toward the promotion of bond and stamp sales.

As usual, we may be very proud of the results of all this effort in Iowa. Our state has topped the quota set for it each month in Washington, and to date ranks third among all the states in per capita investment. Iowa was the first state in which the Treasury "T" flag was awarded to a city in which 90 per cent of all firms employing twenty-five or more people could report their employees were participating in the 10 per cent payroll allotment plan. Cedar Rapids was the city so honored on November 20. Altogether during the first ten months of this year, Iowa has invested $138,869,267 in war bonds and stamps.

As the new year starts, we find war demands increasing and war bond quotas being upped. Here's to a cheerful and willing response to the war savings program of 1943, and an appreciation of the efforts of those who would keep it voluntary, thus exemplifying the democratic way of doing things, which we are fighting the war to defend.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

Board of Trustees Meeting
December 13, 1942

The Board of Trustees of the Iowa State Medical Society met in the central office at eight-thirty Sunday morning, December 13, 1942, with the following doctors present: Trustees O. J. Fay and M. C. Hennessy; F. P. Winkler, president, and R. L. Parker, secretary.

The meeting was called to order, minutes read and approved, bills authorized, employment of the Freeman Decorating Company for the annual meeting approved, and the annual audit of the books for 1942 ordered. The meeting adjourned at nine-thirty.

Meeting of the Procurement and Assignment Service Advisory Committee
December 13, 1942

Dr. T. F. Suchomel, chairman of the Procurement and Assignment Service for Iowa, called a meeting of his advisory district chairmen and other interested persons for Sunday, December 13, 1942, at the Hotel Fort Des Moines in Des Moines. Those present were: Drs. L. L. Carr of West Union, L. R. Woodward of Mason City, H. Keeney of Mallard, J. E. Reeder of Sioux City, J. A. Downing of Des Moines, T. F. Thornton of Waterloo, F. F. Agnew of Independence, J. G. Macrae of Creston, M. C. Hennessy of Council Bluffs, F. P. Winkler of Sibley, A. A. Johnson of Council Bluffs, R. D. Bernard of Clarion, A. W. Erskine of Cedar Rapids, E. M. MacEwen of Iowa City, Colonel R. S. Shane of Pilot Mound, and W. L. Bierring, O. J. Fay, T. A. Burcham, C. L. Putnam, R. D. Holman, and R. L. Parker of Des Moines. Dentists present were: Drs. Fitzgerald of Dubuque, Foster of Cedar Rapids, Voss of Iowa City, and Kennedy of Des Moines.

The meeting was called to order by Dr. Suchomel at ten o'clock and the first matter of business was that of granting temporary licenses to physicians from other states to take care of localities needing physicians during the war. After a thorough discussion, the legislative committee was authorized to draw up a proposed bill for such temporary licenses to be approved by the Board of Medical Examiners and the Procurement and Assignment Service before being presented to the legislature. In the afternoon the district chairman surveyed each county and formulated a list of physicians who might be available for service in 1943. Meeting adjourned at five p. m.

American College of Physicians Cancels Annual Session

Cancellation of the annual session of the American College of Physicians, which was scheduled to be held in Philadelphia April 13 to 16, 1943, has been announced by the Board of Regents.

Roster of Iowa Physicians in Military Service

As of December 21, 1942

Adair County

Cornell, D. D., Greenfield (Camp Murray, Wash.)..Capt., A.U.S.
Gantz, A. J., Greenfield (APO Los Angeles, Cal.)..Capt., A.U.S.

Adams County

Willett, W. J., Carbon (Camp Chaffee, Ark.).....1st Lt., A.U.S.

Allamakee County

Hogan, P. W., Waukon
Ivens, M. H., Waukon (Camp Shelby, La.)
Kiesau. M. F., Postville (Fort Leonard Wood, Mo.)
Rominger, C. W., Waukon

Appanoose County

Edwards, R. E., Centerville (Fort Dix, N. J.)..1st Lt., A.U.S.
Huston, M. D., Centerville (Lowry Field, Colo.)....Capt., A.U.S.

Audubon County

Koehne, F. D., Audubon (Oroville, Wash.)

Benton County

Koontz, L. W., Vinton.....Capt., A.U.S.
Senfeld, Sidney, Belle Plaine

Black Hawk County

Bickley, D. W., Waterloo (Camp Barkeley, Texas) 1st Lt., A.U.S.
Bickley, J. W., Waterloo (Fort Sill, Okla.).....1st Lt., A.U.S.
Butts, J. H., Waterloo (Memphis, Tenn.)...Lt. Cmdr., U.S.N.R.
Cooper, C. N., Waterloo (Seattle, Wash.)...Lt. Cmdr., U.S.N.R.
Ellyson, C. D., Waterloo (Norfolk, Va.).....Lt. (jg) U.S.N.R.
Hartman, H. J., Waterloo (Fort Lewis, Wash.)..Capt., A.U.S.
Henderson, L. J., Cedar Falls (Fort Ord, Cal.)..Capt., A.U.S.
Hoyt, C. N., Cedar Falls (McClellan Field, Ala.).1st Lt., A.U.S.
Ludwick, A. L., Waterloo (APO New York, N. Y.).Capt., A.U.S.
O'Keefe, P. T., Waterloo (Camp Blanding, Fla.)..Capt., A.U.S.
Paige, R. T., LaPorte City (Des Moines, Ia.).Lt. Cmdr., U.S.N.R.
Rohlf, E. L., Jr., Waterloo (APO New York, N. Y.) .....1st. Lt., A.U.S.
Seibert, C. W., Waterloo (Fort Wright, Wash.) Capt., A.U.S.
Smith, E. E., Waterloo (Scott Field, Ill.).....Major, A.U.S.
Smith, R. I., Waterloo (Reno, Nevada).....1st Lt., A.U.S.
Smith, R. G., Cedar Falls (APO New York, N. Y.).Capt., A.U.S.
Trunnell, T. L., Waterloo (care P.M., New York, N. Y.) .....Lt. (jg), U.S.N.R.

Boone County

Brewster, E. S., Boone (Camp Chaffee, Ark.).....Capt., A.U.S.
Healy, M. D., Boone
Shane, R. S., Pilot Mound (Des Moines, Ia.) Lt. Col., A.U.S.

Bremer County

Amlie, P. J., Tripoli (Des Moines, Ia.)
Rathe, H. W., Waverly (Fort Jackson, S. C.).....Capt., A.U.S.

Buchanan County

Barton, J. C., Independence (Omaha, Neb.).....Capt., A.U.S.
Leehey, P. J., Independence (APO San Francisco, Cal.) .....Capt., A.U.S.
Loeck, J. F., Aurora (Camp Hood, Texas).....Capt., A.U.S.

Buena Vista County

Almquist, R. E., Albert City (Camp Shelby, Miss.).Capt., A.U.S.
Brecher, P. W., Storm Lake (Camp White, Ore.) Major, A.U.S.
Mailliard, R. E., Storm Lake (Watertown, N. Y.) Major, A.U.S.
Shope, C. D., Storm Lake (Fort Des Moines, Ia.) 1st Lt., A.U.S.
Witte, H. J., Storm Lake (Fort Robinson, Neb.)..Capt., A.U.S.

Butler County

Anderson, B. V., Greene (Kansas City, Mo.)
James, R. O., Allison (Mare Island, Cal.)
Rolfs, F. O., Parkersburg (Springfield, Mo.)

Calhoun County

Faust, J. H., Manson (San Diego, Cal.)....Lt. Cmdr., U.S.N.R.
Grinley, A. V., Rockwell City (APO New York, N. Y. .....1st Lt., A.U.S.
Hobart, F. W., Lake City (Camp Grant, Ill.)....Capt., A.U.S.
Peek, L. H., Lake City (Jefferson Barracks, Mo.)..Capt., A.U.S.
Stevenson, W. W., Rockwell City (San Francisco, Cal.) .....Lt. Cmdr., U.S.N.R.
Weyer, J. J., Lohrville (Camp Carson, Colo.)....1st Lt., A.U.S.

Carroll County

Anneberg, A. R., Carroll (Camp Barkeley, Texas)
Anneberg, W. A., Carroll
Cochran, J. L., Carroll (Gulfport, Miss.)
Cross, D. L., Coon Rapids .....Lt. (sg), U.S.N.R.
Freedland, Maurice, Coon Rapids
Morrison, J. R., Carroll (Carlisle Barracks, Penn.)
Pascoe, P. L., Carroll (Bowman Field, Ky.)
Scannell, R. C., Carroll (Fort Leonard Wood, Mo.)
Tindall, R. N., Coon Rapids
Wyatt, M. R., Manning (Carlisle Barracks, Penn.)

Cass County

Egbert, D. S., Atlantic (Fort Snelling, Minn.) Major, A.U.S.
Longstreth, C. M., Atlantic (Norman, Okla).Lt. Cmdr., U.S.N.R.
Needles, R. M., Atlantic (Camp Polk, La.)....1st Lt., A.U.S.
Petersen, M. T., Atlantic (Camp Barkeley, Texas)..Capt., A.U.S.

Cedar County

Mosher, M. L., West Branch (Camp Chaffee, Ark.) .....1st Lt., A.U.S.
O'Neal, H. E., Tipton (Pine Camp, N. Y.).....Major, A.U.S.

Cerro Gordo County

Adams, C. O., Mason City (Brigham City, Utah)
Egloff, W. C., Mason City (Balboa Island, Cal.)
Hale, A. E., Mason City (Camp Hale, Colo.)
Harris, R. H., Mason City (Columbus, Ohio)
Harrison, G. E., Mason City (Boston, Mass.)
Houlahan, J. E., Mason City (Sacramento, Cal.)
Lannon, J. W., Clear Lake (Carlisle Barracks, Penn.)
Long, D. L., Mason City (Santa Ana, Cal.)
Marinos, H. G., Mason City (APO San Francisco, Cal.)
Sternhill, Irving, Mason City (APO New York, N. Y.)

Cherokee County

Bullock, G. D., Washta (Camp Livingston, La.)..1st Lt., A.U.S.
Ihle, C. W., Jr., Cleghorn (Fort Leonard Wood, Mo.) .....Capt., A.U.S.
Noble, R. P., Cherokee (Ephrata, Wash.) .....Capt., A.U.S.
Swift, C. H., Jr., Marcus (Fort Bliss, Texas)....Capt., A.U.S.

Chickasaw County

Caulfield, J. D., New Hampton (Denver, Colo.)....Capt., A.U.S.
Murphey, A. L., Fredericksburg (Fort Clayton, Panama Canal Zone) .....Capt., A.U.S.
O'Connor, E. C., New Hampton (Camp Crowder, Mo.) .....Capt., A.U.S.
Richmond, P. C., New Hampton (Camp Gruber, Okla.) .....Capt. A.U.S.

Clay County

Adams, G. W., Royal (Fort Clayton, Panama Canal Zone)
Edington, F. D., Spencer (Lowry Field, Colo.)..Lt. Col., A.U.S.
Jones, C. C., Spencer (Fleet PO, San Francisco, Cal.) .....Lt. (sg), U.S.N.R.
King, D. H., Spencer (Spokane, Wash.).....Capt., A.U.S.

Clayton County

Anderson, H. M., Strawberry Point (Joplin, Mo.)
Rhomberg, E. B., Guttenberg (Fort Sam Houston, Texas)

Clinton County

Ellison, G. M., Clinton (Blessing, Texas)
Hill, D. E., Clinton
King, R. C., Clinton (Camp Chaffee, Ark.)
Meyer, A. K., Clinton (Denver, Colo.)
Norment, J. E., Clinton (Mare Island, Cal.)
Riedesel, E. V., Wheatland (Fort Douglas, Utah)
Snyder, D. C., De Witt
Van Epps, E. F., Clinton
Waggoner, C. V., Clinton (Seattle, Wash.)..Lt. Cmdr., U.S.N.R.

Crawford County

Fee, C. H., Denison (Bowman Field, Ky.)
Maire, E. J., Vail (San Francisco, Cal.)
Wetrich, M. F., Manilla

Dallas-Guthrie Counties

Fail. C. S., Adel (Farragut Air Base, Idaho).....U.S.N.R.
Margolin, J. M., Perry (Camp Chaffee, Ark.).....A.U.S.
Nicoll, C. A., Panora (Camp Barkeley, Texas)..Capt., A.U.S.
Osborn, C. R., Dexter (San Francisco, Cal.)....Lt. (jg), U.S.N.R.
Todd, D. W., Guthrie Center (Camp Barkeley, Texas) .....1st. Lt., A.U.S.
Wilke, F.A., Woodward (APO New York, N. Y.)

Decatur County

Doss, W. N., Leon (APO San Francisco, Cal.)
Gamet, E. E., Lamoni (Tacoma, Wash.)

Delaware County

Baumgarten, Oscar, Earlville (APO Los Angeles, Cal.)
Clark, R. E., Manchester (Fort Riley, Kan.)....1st Lt., A.U.S.

Des Moines County

Eigenfeld, M. L., Burlington (Camp Robinson, Ark.) .....1st. Lt., A.U.S.
Heitzman, P. O., Burlington (Fort Leonard Wood, Mo.)
Jenkins, G. D., Burlington (West Point, N. Y.)
Lohmann, C. J., Burlington (Fort Lewis, Wash.)
McKitterick, J. C., Burlington (Davisville, R. I.)
Moerke, R. F., Burlington (Abilene, Texas)

Dickinson County

Buchanan, J. J., Milford (Great Lakes, Ill.).Lt. Cmdr., U.S.N.R.
Henning, G. G., Milford (Camp Pickett, Va.).....Capt., A.U.S.
Nicholson, C. G., Spirit Lake (Sawtelle, Cal.).....Capt., A.U.S.
Rodawig, D. F., Spirit Lake (Fort Hancock, N. J.) .....Capt., A.U.S.

Dubuque County

Beddoes, M. G., Cascade (Kansas City, Mo.)....Capt., A.U.S.
Conzett, D. C., Dubuque (Fort Riley, Kan.)....Major, A.U.S.
Cunningham, J. C., Dubuque (Meridian, Miss.) Capt., A.U.S.
Edstrom, Henry, Dubuque (Denver, Colo.).....Major, A.U.S.

Entringer, A. J., Dubuque (APO San Francisco, Cal.) ..... Capt., A.U.S.
Hall, C. B., Dubuque (San Antonio, Texas) ..... 1st Lt., A.U.S.
Knoll, A. H., Dubuque (San Francisco, Cal.) ..... Major, A.U.S.
Langford, W. R., Epworth (Rapid City, S. Dak.) .. Capt., A.U.S.
Lavery, H. B., Dubuque (Washington, D. C.) .... Lt. Col., A.U.S.
Leik, D. W., Dubuque (Las Vegas, Nevada) .... 1st Lt., A.U.S.
Mueller, J. J., Dubuque (Hattiesburg, Miss.) .... 1st Lt., A.U.S.
Olson, P. F., Dubuque (Fleet PO, San Francisco, Cal.) ..... Lt. (sg), U.S.N.R.
Painter, R. C., Dubuque (care PM, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Paulus, J. W., Dubuque (Camp Merced, Cal.) .... 1st Lt., A.U.S.
Plankers, A. G., Dubuque (APO New York, N. Y.) Major, A.U.S.
Quinn, F. P., Dubuque (El Paso, Texas) ..... Major, A.U.S.
Scharle, Theodore, Dubuque (Fort Lawton, Wash.) Capt., A.U.S.
Schueller, C. J., Dubuque (Camp Barkeley, Texas) 1st Lt., A.U.S.
Sharpe, D. C., Dubuque (Fort Leonard Wood, Mo.) .. Capt., A.U.S.
Smith, C. W., Dubuque (care PM, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Steffens, L. F., Dubuque (Fort Smith, Ark.) ..... Major, A.U.S.
Straub, J. J., Dubuque (care PM, San Francisco, Cal.) ..... Lt. (sg), U.S.N.R.
Ward, D. F., Dubuque (Piedmont, Cal.) .... Lt. Cmdr., U.S.N.R.

Emmet County

Clark, J. P., Estherville (Fort Sam Houston, Texas) ..... Capt., A.U.S.
Miller, O. H., Estherville (Gowen Field, Idaho) ..... Lt. Cmdr., U.S.N.R.

Fayette County

Belding, Leland, Waucoma
Camp, D. E., West Union (Camp Blanding, Fla.) ... Capt., A.U.S.
Gallagher, J. P., Oelwein (San Diego, Cal.)
Henderson, W. B., Oelwein (Jefferson Barracks, Mo.)
Hess, A. M., West Union
Moen, H. P., West Union (Denver, Colo.)
Sulzbach, John, Oelwein

Floyd County

Baltzell, W. C., Charles City (Camp McCoy, Wis.) .. Capt., A.U.S.
Flater, N. C., Floyd (Rockford, Ill.) ..... Capt., A.U.S.
Knight, R. A., Rockford (San Diego, Cal.) ..... Lt. (sg), U.S.N.R.
Mackie, D. G., Charles City (Topeka, Kan.) .... 1st Lt., A.U.S.
Miner, J. B., Jr., Charles City (San Francisco, Cal.) Lt., U.S.N.R.
Tolliver, H. A., Charles City (Fort Cronkhide, Cal.) Capt., A.U.S.

Franklin County

Byers, W. L., Sheffield (Jefferson Barracks, Mo.) 1st Lt., A.U.S.
Hedgecock, L. E., Hampton (care PM, San Francisco, Cal.) ..... Lt. (sg), U.S.N.R.
Walton, S. G., Hampton (Camp Robinson, Ark.) 1st Lt., A.U.S.

Fremont County

Kerr, W. H., Hamburg (Camp Phillips, Kan.) .... Capt., A.U.S.
Marrs, W. D., Tabor (APO, New York, N. Y.) .. 1st Lt., A.U.S.
Wanamaker, A. R., Hamburg (Los Angeles, Cal.) .. Capt., A.U.S.

Greene County

Cartwright, F. P., Grand Junction (Casper, Wyo.) Capt., A.U.S.
Castles, W. A., Jr., Rippey (APO San Francisco, Cal.) ..... Capt. A.U.S.
Hanson, L. C., Jefferson (Camp Rucker, Ala.) ... 1st Lt., A.U.S.
Jongewaard, A. J., Jefferson (St. Louis, Mo.) ..... U.S.N.R.
Limberg, J. I., Jr., Jefferson (APO San Francisco, Cal.) ..... Capt., A.U.S.
Lohr, P. E., Churdan (San Diego, Cal.) ..... A.U.S.

Grundy County

Rose, J. E., Grundy Center (Norman, Okla.) Lt. Cmdr., U.S.N.R.

Hamilton County

Buxton, O. C., Webster City (March Field, Cal.) .. 1st Lt., A.U.S.
Howar, B. F., Jewell (APO New York, N. Y.) ..... Capt., A.U.S.
James, D. W., Kamrar (Camp Livingston, La.) .... Capt., A.U.S.
Lewis, W. B., Webster City (Camp Young, Cal.) .. Capt., A.U.S.
Mooney, F. P. Jewell (APO New York, N. Y.)
Paschal, G. A., Williams (Camp Barkeley, Texas) .. Capt., A.U.S.
Patterson, R. A., Webster City (San Diego, Cal.) ..... Lt. Cmdr., U.S.N.R.
Ptacek, J. L., Webster City (Sheppard Field, Texas)
Thompson, E. D., Webster City (Biloxi, Miss.) .. Capt., A.U.S.

Hardin County

Houlihan, F. W., Ackley (Iowa City, Iowa) ..... U.S.N.R.
Jansonius, J. W., Eldora (Vancouver, Wash.) ..... A.U.S.
Johnson, R. J., Iowa Falls (Fort Bliss, Texas) .. Capt., A.U.S.
Johnson, W. A., Alden (Pendleton, Ore.)
Shurts, J. J., Eldora (Camp Roberts, Cal.) ..... 1st Lt., A.U.S.
Todd, V. S., Eldora (Abilene, Texas)

Harrison County

Bergstrom, A. C., Missouri Valley (Camp Robinson, Ark.)
Byrnes, C. W., Dunlap (Jefferson Barracks, Mo.)
Heise, C. A., Jr., Missouri Valley
Tamisiea, F. X., Missouri Valley (Jefferson Barracks, Mo.) ..... 1st Lt., A.U.S.

Henry County

Brown, W. B., Mount Pleasant (Springfield, Mo.) Capt., A.U.S.
Gloeckler, B. B., Mount Pleasant (Fort Myers, Fla.) Capt., A.U.S.
Hartley, B. D., Mount Pleasant (Phoenix, Ariz.) .. Capt., A.U.S.
Megorden, W. H., Mount Pleasant (Ogden, Utah) 1st Lt., A.U.S.
Ristine, L. P., Mount Pleasant (Sioux Falls, S. Dak.) ..... Major, A.U.S.

Howard County

Buresh, Abner, Lime Springs (San Diego, Cal.)
Nierling, P. A., Cresco (Camp Polk, La.) ..... 1st Lt., A.U.S.

Humboldt County

Arent, A. S., Humboldt (Stockton, Cal.) ..... 1st Lt., A.U.S.
Coddington, J. H., Humboldt (Fresno, Cal.) ..... 1st Lt., A.U.S.

Ida County

Dressler, J. B., Ida Grove (Omaha, Neb.) ..... 1st Lt., A.U.S.
Harris, H. H., Battle Creek (Omaha, Neb.) .... 1st Lt., A.U.S.
Martin, J. W., Holstein (Montgomery, Ala.) ..... Capt., A.U.S.

Iowa County

McDaniel, J. D., Marengo (Fort Clark, Texas) ..... A.U.S.
Miller, D. F., Williamsburg (Farragut Air Base, Idaho) ..... Lt. (jg), U.S.N.R.

Jasper County

Doake, Clarke, Newton ..... 1st Lt., A.U.S.
Minkel, R. M., Newton (APO New York, N. Y.) 1st Lt., A.U.S.
Ritchey, S. J., Newton ..... Major, A.U.S.

Jefferson County

Castell, J. W., Fairfield (APO New York, N. Y.) Capt., A.U.S.
Gittler, Ludwig, Fairfield (APO New York, N. Y.) .. Major, A.U.S.
Graber H. E., Fairfield (Carlisle Barracks, Penn.) Major, A.U.S.
James, L. D., Fairfield (Camp Dodge, Iowa) .... Lt. Col., A.U.S.
Taylor, I. C., Fairfield (Washington, D. C.) .... 1st Lt., A.U.S.

Johnson County

Agnew, J. W., Iowa City ..... A.U.S.
Allen, J. H., Iowa City ..... Capt. A.U.S.
Boiler, W. F., Iowa City (Fort Leonard Wood, Mo.) ..... Major, A.U.S.
Boyd, E. J., Iowa City (Camp Blanding, Fla.) .. 1st Lt., A.U.S.
Brinkhous, K. M., Iowa City (Fort Sam Houston, Texas) ..... Major, A.U.S.
Callahan, G. D., Iowa City (San Diego, Cal.) .. Lt. (sg), U.S.N.R.
Cooper, W. K., Iowa City (Jefferson Barracks, Mo.) Capt., A.U.S.
Crowell, E. A., Iowa City (Spokane, Wash.) .. 1st Lt., A.U.S.
Diddle, A. W., Iowa City (Key West, Fla.) .. Lt. (jg), U.S.N.R.
Dorner, R. A., Iowa City ..... A.U.S.
Elmquist, H. S., Iowa City (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Emmons, M. B., Iowa City (Fort Sam Houston, Texas) ..... 1st Lt., A.U.S.
Flynn, J. E., Iowa City (Hot Springs, Ark.) ..... A.U.S.
Fourt, A. S., Iowa City (APO New York, N. Y.) .. Col., A.U.S.
Francis, N. L., Iowa City (Annapolis, Md.) Lt. (jg), U.S.N.R.
Galinsky, L. J., Oakdale (Fort Logan, Colo.) ..... A.U.S.
Garlinghouse, R. O., Iowa City (Fort Snelling, Minn.) .. A.U.S.
Hardin, R. C., Iowa City (APO New York, N. Y.) ..... A.U.S.
Harris, K. S., Iowa City (Camp Crowder, Mo.) ..... A.U.S.
Hartung, Walter, Iowa City (Fort Des Moines, Iowa) .. A.U.S.
Irwin, R. L., Iowa City (Great Lakes, Ill.) Lt. Cmdr., U.S.N.R.
January, L. E., Iowa City (Davis Field, Ariz.) ..... A.U.S.
Keisler, H. D., Iowa City ..... A.U.S.
Lage, R. H., Iowa City ..... U.S.N.R.
Longwell, F. H., Iowa City (Cumberland, Md.) ... 1st Lt., A.U.S.
Nagyfy, S. F., Iowa City (Memphis, Tenn.) ... Lt. (jg), U.S.N.R.
Newman, R. W., Iowa City (Upper Darby, Penn.) ..... A.U.S.
Paulus, E. W., Iowa City (APO New York, N. Y.) ..... A.U.S.
Petersen, V. W., Iowa City (APO New York, N. Y.) ..... Major, A.U.S.
Sells, R. L., Jr., Iowa City (Hamilton Field, Cal.) .. 1st Lt., A.U.S.
Smith, H. F., Iowa City (Great Lakes, Ill.) .. Lt. Cmdr., U.S.N.R.
Springer, E. W., Iowa City (APO San Francisco, Cal.) ..... 1st. Lt., A.U.S.
Stadler, H. E., Iowa City (Fort Harrison, Ind.) .. 1st Lt., A.U.S.
Staggs, W. A., Iowa City (Camp Robinson, Ark.) .. 1st Lt., A.U.S.
Stephens, R. L., Iowa City (Miami Beach, Fla.) Capt., A.U.S.
Stump, R. B., Iowa City (Fort Leonard Wood, Mo.) .. A.U.S.
Titus, E. L., Iowa City (Fort Wright, N. Y.) .... Col., A.U.S.
Vest, W. M., Iowa City (Fort Ord, Cal.) ..... Capt., A.U.S.
Ziffren, S. E., Iowa City (Springfield, Mo.) .... 1st. Lt., A.U.S.

Junior Members

Adams, M. P., Iowa City
Ahrens, J. H., Iowa City
Ball, A. L., Iowa City
Barrent, M. E., Iowa City (Camp Tyson, Tenn.) .. Capt., A.U.S.
Black, N. M., Iowa City (McChord Field, Wash.) 1st Lt., A.U.S.
Blair, J. D., Iowa City (APO San Francisco, Cal.) .. Major, A.U.S.
Brintnall, E. S., Iowa City (Colorado Springs, Colo.) ..... 1st Lt., A.U.S.
Burr, S. P., Iowa City
Connole J. F., Iowa City (Camp Bowie, Texas) .. 1st Lt., A.U.S.
Couch, O. A., Iowa City (Camp Van Dorn, Miss.) .. 1st Lt., A.U.S.
Decker, C. E., Iowa City
Donnelly B. A., Iowa City (APO San Francisco, Cal.) ..... 1st Lt., A.U.S.
Ehrenhaft, J. L., Iowa City (March Field, Cal.) .. 1st Lt., A.U.S.
Englerth, F. L., Iowa City
Freiberg, M., Iowa City
Glassman A. L., Iowa City (Palm Springs, Cal.) 1st Lt., A.U.S.
Gilliland, C. H., Iowa City (Great Lakes, Ill.) Lt. (jg), U.S.N.R.
Hamilton, H. E., Iowa City (Chicago, Ill.) ..... 1st Lt., A.U.S.
Harms, G. E., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Ide, L. W., Iowa City (Fort Warren, Wyo.) ..... 1st Lt., A.U.S.
Jacobs, C. A., Iowa City (APO New York, N. Y.) .. Major, A.U.S.
Keil, P. G., Iowa City (Sioux City, Iowa) ..... 1st Lt., A.U.S.
Kelberg, M. R., Iowa City (Treasure Island, Cal.) ..... Lt. (jg), U.S.N.R.

Keleher, M. F., Iowa City (Great Lakes, Ill.)..Lt. (jg), U.S.N.R.
Keohen, G. F., Iowa City (Camp Grant, Ill.)....Capt., A.U.S.
Kirkendall, W. M., Iowa City
Kugler, F. E., Iowa City (Fort Warren, Wyo.)....Capt., A.U.S.
Lowry, F. C., Iowa City
McCann, J. P., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
McQuiston, W. O., Iowa City (Chicago, Ill.)....1st Lt., A.U.S.
Moen, B. H., Iowa City
Moon, R. E., Iowa City (Camp Bowie, Texas)....1st Lt., A.U.S.
Phillips, R. M., Iowa City (San Francisco, Cal.) 1st Lt., A.U.S.
Pulliam, R. L., Iowa City
Randall, C. G., Iowa City
Randall, R. G., Iowa City
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.) .....1st Lt., A.U.S.
Russin, L. A., Iowa City (Fort Blanding, Fla.)....Capt., A.U.S.
Saar, J. L., Iowa City
Sawtelle, W. W., Iowa City
Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Shand, J. A., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Shapiro, S. I., Iowa City
Simpson, F. E., Iowa City
Skewis, J. E., Iowa City (Rochester, N. Y.)..Lt. (jg), U.S.N.R.
Skouge, O. T., Iowa City
Towle, R. A., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Warren, R. F., Iowa City
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.) .....1st. Lt., A.U.S.
Wicks, W. J., Iowa City
Williams, L. A., Iowa City
Willumsen, H. C., Iowa City
Wolkin, J., Iowa City (San Antonio, Texas)....Capt., A.U.S.
Yetter, W. L., Iowa City (APO New York, N. Y.) Capt., A.U.S.
Zahrt, N. E., Iowa City (Miami Beach, Fla.)....1st Lt., A.U.S.
Zimmerman, H. A., Iowa City (Santa Ana, Cal.)..1st Lt., A.U.S.

Keokuk County

Bjork, Floyd, Keota (Camp Barkeley, Texas).....A.U.S.
Doyle, J. L., Sigourney (Camp Barkeley, Texas).....A.U.S.
Engelmann, A. T., What Cheer (Camp Polk, La.) Capt., A.U.S.
Graham, J. A., Gibson (Needles, Cal.).....1st Lt., A. U. S.
Montgomery, G. E., Keota (Fort Sam Houston, Texas)....A.U.S.
Wiley, Dudley, Hedrick (Mason City, Wash.)

Kossuth County

Clapsaddle, D. W., Burt (Durham, N. C.).....1st Lt., A.U.S.
Williams, R. L., Lakota (San Diego, Cal.)..Lt. Cmdr., U.S.N.R.

Lee County

Ashline, G. H., Keokuk (Camp Young, Cal.)
Cleary, H. G., Fort Madison (Parsons, Kan.)
Cooper, R. E., Keokuk (Fort Leonard Wood, Mo.)
Johnstone, A. A., Keokuk (Camp Robinson, Ark.)
McKee, T. L., Keokuk (San Francisco, Cal.).....Maj., A.U.S.
Pumphrey, L. C., Keokuk (Fort Leavenworth, Kan.)
Rankin, J. R., Keokuk (APO San Francisco, Cal.)
Steffey, F. L., Keokuk (Fort Snelling, Minn.)
Van Werden, B. D., Keokuk (Fort Jackson, S. C.)..Capt., A.U.S.

Linn County

Andre, G. R., Lisbon (Camp Barkeley, Texas)....Major, A.U.S.
Berney, P. W., Cedar Rapids (San Francisco, Cal.) Capt., A.U.S.
Challed, D. S., Cedar Rapids (Fort Ord, Cal.)....1st Lt., A.U.S.
Chapman, R. M., Cedar Rapids (Chicago, Ill.)..1st Lt., A.U.S.
Coughlan, V. H., Cedar Rapids (Fort Snelling, Minn.)
Courter, W. O., Cedar Rapids (Fort Warren, Wyo.).Capt., A.U.S.
Crew, P. I., Marion (Montgomery Field, Ala.)....Capt., A.U.S.
Dunn, F. C., Cedar Rapids (Pocatello, Idaho)....Capt., A.U.S.
Halpin, L. J., Cedar Rapids (Atlanta, Ga.)....Major, A.U.S.
Hecker J. T., Cedar Rapids (Pecos, Texas).....1st Lt., A.U.S.
Jirsa, H. O., Cedar Rapids (APO New York, N. Y.) Capt., A.U.S.
Keith, J. J., Marion (APO San Francisco, Cal.)..Capt., A.U.S.
Kieck, E. G., Cedar Rapids (San Diego, Cal.) Lt. Cmdr., U.S.N.R.
Kruckenberg, W. G., Mount Vernon (San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Locher, R. C., Cedar Rapids (Brownsville, Texas)..Capt., A.U.S.
MacDougal, R. F., Cedar Rapids (Salina, Kan.)....Capt., A.U.S.
McConkie, E. B., Cedar Rapids (Sioux Falls, S. Dak.) .....Major, A.U.S.
McQuiston, J. S., Cedar Rapids (Salina, Kan.)..Major, A.U.S.
Netolicky, R. Y., Cedar Rapids (San Francisco, Cal.) .....Lt. (sg), U.S.N.R.
Noe, C. A., Cedar Rapids (Hot Springs, Ark.)..Major, A.U.S.
Parke, John, Cedar Rapids (APO New York, N. Y.) Capt., A.U.S.
Proctor, R. D., Cedar Rapids (Corpus Christi, Texas) .....Lt. Cmdr., U.S.N.R.
Redmond, J. J., Cedar Rapids (APO New York, N. Y.) .....Capt., A.U.S.
Rieniets, J. H., Cedar Rapids (Great Lakes, Ill.) .....Lt. Cmdr., U.S.N.R.
Sedlacek, L. B., Cedar Rapids (Camp Screven, Ga.) Major, A.U.S.
Smrha, J. A., Cedar Rapids (Camp Davis, N. C.)..1st Lt., A.U.S.
Stark, C. H., Cedar Rapids (Pendleton Field, Ore.).Capt., A.U.S.
Sulek, A. E., Cedar Rapids (APO San Francisco, Cal.) .....Capt., A.U.S.
Woodhouse, K. W., Cedar Rapids (APO New York, N. Y.) .....Major, A.U.S.
Wray, R. M., Cedar Rapids (APO San Francisco, Cal.) .....Capt., A.U.S.
Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.) .....Lt. (sg), U.S.N.R.

Louisa County

DeYarman, K. T., Morning Sun (San Antonio, Texas)

Lucas County

Lister, K. E., Chariton (Fort Snelling, Minn.)

Lyon County

Cook, S. H., Rock Rapids (Carlisle Barracks, Penn.) .....Capt., A.U.S.
Corcoran, T. E., Rock Rapids (APO New York, N. Y.) .....Capt. A.U.S.
De Young, G. M., George (Camp Barkeley, Texas)..Capt., A.U.S.
Moriarty, J. F., Rock Rapids (Fort Leonard Wood, Mo.) .....1st Lt., A.U.S.

Madison County

Boden, H. N., Truro (Fresno, Cal.)
Chesnut, P. F., Winterset
Wicks, R. F., Winterset (Portland, Ore.)
Veltman, J. F., Winterset (St. Louis, Mo.).....Capt., A.U.S.

Mahaska County

Bennett, G. W., Oskaloosa (Fort Riley, Kan.)..Major, A.U.S.
Clark, G. H., Oskaloosa.....Lt. Cmdr., U.S.N.R.
Lemon, K.M., Oskaloosa.....1st Lt., A.U.S.

Marion County

Elliott, V. J., Knoxville (South Laguna, Cal.)....Capt., A.U.S.
Mater, D. W., Knoxville (Lincoln, Neb.).....Capt., A.U.S
Ralston, F. P., Knoxville (Indio, Cal.).....Capt., A.U.S.
Schiek, C. M., Knoxville.....Lt. Cmdr., U.S.N.R.
Schroeder, M. C., Pella (Camp Uhlan, Texas)....1st Lt., A.U.S.
Williams, D. B., Knoxville.....Capt. A.U.S.

Marshall County

Carpenter, R. C., Marshalltown (APO New York, N. Y.) .....Capt., A.U.S.
Marble, E. J., Marshalltown (San Diego, Cal.).Lt. (sg), U.S.N.R.
Marble, W. P., Marshalltown (Walla Walla, Wash.) Capt., A.U.S.
Meyer, M. G., Marshalltown (Camp Polk, La.)....Capt., A.U.S.
Noonan, J. J., Marshalltown (San Diego, Cal.)..Major, A.U.S.
Phelps, R. E., State Center (Camp Baker, Cal.)..1st Lt., A.U.S.
Sinning, J. J., Melbourne (Camp Robinson, Ark.)..Capt., A.U.S.
Smith, E. M., State Center (Gowen Field, Idaho)..Major, A.U.S.
Stegman, J. J., Marshalltown (Portland, Ore.)..Capt., A.U.S.
Wells, R. C., Marshalltown (Gowen Field, Idaho) 1st Lt., A.U.S.
Wolfe, O. D., Marshalltown (Fort Riley, Kan.)..Capt., A.U.S.
Wolfe, R. M., Marshalltown (Pensacola, Fla.).Lt. (jg), U.S.N.R.

Mills County

DeYoung, W. A., Glenwood (Camp Crowder, Mo.)..Capt., A.U.S.
Magaret, E. C., Glenwood (Lubbock, Texas)....1st Lt., A.U.S.
Shonka, T. E., Malvern (Baltimore, Md.).....1st Lt., A.U.S.

Mitchell County

Culbertson, R. A., St. Ansgar (Camp White, Ore.) Major, A.U.S.
Moore, E. E. (Camp Pickett, Virginia).....Major, A.U.S.
Owen, William (San Diego, Cal.).....Lt. (jg), U.S.N.R.
Walker, T. G., Riceville (Minneapolis, Minn.)..Lt. (sg), U.S.N.R.

Monona County

Almer, L. E., Moorehead (Fort Knox, Ky.)
Gaukel, L. A., Onawa (APO Seattle, Wash.)....1st Lt., A.U.S.
Harlan, M. E., Onawa (care PM, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Stauch, M. O., Whiting (Fort Rosecrans, Cal.).....A.U.S.
Wainwright, M. T., Mapleton (Camp Barkeley, Texas)...A.U.S.
Wolpert, P. L., Onawa (Denver, Colo.).....Capt., A.U.S.

Monroe County

Richter, H. A., Albia (San Antonio, Texas).....Capt., A.U.S.
Smith, R. A., Albia (San Antonio, Texas).....1st Lt., A.U.S.

Montgomery County

Bastron, H. C., Red Oak (Pendleton, Ore.).....Major, A.U.S.
Moriarty, L. R., Villisca (Camp Robinson, Ark.)
Sorensen, E. M., Red Oak

Muscatine County

Ady, A. E., West Liberty (care PM, San Francisco, Cal.)U.S.N.R.
Asthalter, R. W., Muscatine (Fort Meade, Md.)..1st Lt., A.U.S.
Carlson, E. H., Muscatine (Kalamazoo, Mich.)....Capt., A.U.S.
Goad, R. R., Muscatine (Washington, D. C.) Lt. Cmdr., U.S.N.R
Kimball, J. E., Jr., West Liberty (APO Miami, Fla.)
Lindley, E. L., Muscatine (APO Los Angeles, Cal.).Capt., A.U.S.
Muhs, E. O., Muscatine (Camp Robinson, Ark.)....Capt., A.U.S.
Norem, Walter, Muscatine (APO Miami, Fla.)....Capt., A.U.S.
Sywassink, G. A., Muscatine (Camp Campbell, Ky.)Major, A.U.S.
Whitmer, L. H., Wilton Junction (Fort Sill, Okla.).Major, A.U.S.

O'Brien County

Getty, E. B., Primghar (Camp Robinson, Ark.)..1st Lt., A.U.S.
Hayne, W. W., Paullina (APO New York, N. Y.)..1st Lt., A.U.S.
Moen, S. T., Hartley (Fort Ord, Cal.).....Major, A.U.S.
Myers, K. W., Sheldon (Watertown, S. Dak.)..1st Lt., A.U.S.

Osceola County

Kuntz, G. S., Sibley (APO New York, N. Y.)

Page County

Blackman, Nathan, Shenandoah.....Capt., A.U.S.
Bossingham, E. N., Clarinda (Camp Roberts, Cal.)..Capt., A.U.S.
Burdick, F. D., Shenandoah (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.

Burnett, F. K., Clarinda (Fort Warren, Wyo.)....Major, A.U.S.
Little, E. B., Shenandoah.....1st Lt., A.U.S.
Rausch, G. R., Clarinda (Wendover Field, Utah) 1st Lt., A.U.S.
Savage, L. W., Shenandoah (Fort Meade, Md.)..1st Lt., A.U.S.

Palo Alto County

Davey, W. P., Emmetsburg (San Diego, Cal.) Lt. (jg), U.S.N.R.

Plymouth County

Foss, R. H., Remsen (Salt Lake City, Utah)..1st Lt., A.U.S.
Wolfson, Harold (Fort Lewis, Wash.).....Capt., A.U.S.

Pocahontas County

Blair, F. L., Jr., Fonda.....1st Lt., A.U.S.
Herrick, T. G., Gilmore City (Fort Snelling, Minn.) Capt., A.U.S.
Larson, J. B., Laurens (Camp Barkeley, Texas)..1st Lt., A.U.S.
Leserman, L. K., Rolfe (Camp Livingston, La.)..1st Lt,. A.U.S.

Polk County

Abbott, W. D., Des Moines (Oakland, Cal.)..Lt. Cmdr., U.S.N.R.
Anderson, N. B., Des Moines (APO New York, N. Y.).....Lt. Col., A.U.S.
Angell, C. A., Des Moines (Camp Barkeley, Texas).Capt., A.U.S.
Anspach, R. S., Mitchellville (MacDill Field, Fla.) Major, A.U.S.
Barner, J. L., Des Moines (Atlanta, Ga.)....Major, A.U.S.
Barnes, B. C., Des Moines (Ogden, Utah).....Capt., A.U.S.
Bates, M. T., Des Moines (care PM, New York, N. Y.).....Lt. Cmdr., U.S.N.R.
Bender, H. R., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Bond, T. A., Des Moines (Bethesda, Md.)..Lt. (jg), U.S.N.R.
Bone, H. C., Des Moines (Santa Barbara, Cal.)..Capt., A.U.S.
Brown, A. W., Des Moines (Fort Leavenworth, Kan.).....Capt., A.U.S.
Bruner, J. M., Des Moines (Fort Bliss, Texas)....Major, A.U.S.
Bruns, P. D., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Burgeson, F. M., Des Moines (APO New York, N. Y.).....Capt., A.U.S.
Caldwell, J. W., Des Moines (Edmonton, Alberta, Canada).....Capt., R.C.A.
Chambers, J. W., Des Moines (Omaha, Neb.)..1st Lt., A.U.S.
Chase, W. B., Jr., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Clark, G. E., Jr., Des Moines (Walla Walla, Wash.).....1st Lt., A.U.S.
Connell, J. R., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Corn, H. H., Des Moines (St. Louis, Mo.).....1st Lt., A.U.S.
Coughlan, D. W., Des Moines (Camp Gruber, Okla.) Capt., A.U.S.
Crowley, D. F., Jr., Des Moines (APO New York, N. Y.).....Capt., A.U.S.
Crowley, F. A., Des Moines (Hot Springs, Ark.) 1st Lt., A.U.S.
DeCicco, Ralph, Des Moines (APO Los Angeles, Cal.).....Capt., A.U.S.
Decker, H. G., Des Moines (Long Beach, Cal.) Lt. (sg), U.S.N.R.
Dushkin, M. A., Des Moines (Fort Huachuca, Ariz.).....Capt., A.U.S.
Elliott, O. A., Des Moines (Pecos, Texas).....1st Lt., A.U.S.
Ellis, H. G., Des Moines (Salt Lake City, Utah) 1st Lt., A.U.S.
Ervin, L. J., Des Moines (Fort Clark, Texas)....Major, A.U.S.
Fried, David, Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Fracasse, John, Des Moines.....1st Lt., A.U.S.
George, E. M., Des Moines (Des Moines, Iowa).....Lt. Cmdr., U.S.N.R.
Gerchek, E. W., Des Moines
Goldberg, Louie, Des Moines (Palm Springs, Cal.)
Gordon, A. M., Des Moines (Fort Ord, Cal.)....Capt., A.U.S.
Graeber, F. O., Des Moines (Aberdeen, S. Dak.)..1st Lt., A.U.S.
Greek, L. M., Des Moines (Camp Crowder, Mo.)..1st Lt., A.U.S.
Gurau, H. H., Des Moines (Portland, Ore.)....1st Lt., A.U.S.
Haines, D. J., Des Moines (Denver, Colo.)....1st Lt., A.U.S.
Harris, D. D., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Harris, H. L., Des Moines.....1st Lt., A.U.S.
Hess, John, Jr., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
James, A. D., Des Moines (Great Lakes, Ill.).....Lt. Cmdr., U.S.N.R.
Johnston, C. H., Des Moines (APO New York, N. Y.).....Lt. Col., A.U.S.
Kast, D. H., Des Moines (St. Louis, Mo.).....Capt., A.U.S.
Kelley, E. J., Des Moines (Treasure Island, Cal.).....Lt. Cmdr., U.S.N.R.
Kelly, D. H., Des Moines (Denver, Colo.).....Major, A.U.S.
Klocksiem, H. L., Des Moines.....Lt. (jg), U.S.N.R.
Kottke, E. E., Des Moines (Temple, Texas)....1st Lt., A.U.S.
Landis, S. N., Des Moines (West Palm Beach, Fla).....1st Lt., A.U.S.
La Tona, Salvatore, Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Lederman, James, Des Moines.....1st Lt., R.C.A.
Lehman, E. W., Des Moines.....Major, A.U.S.
Lovejoy, E. P., Des Moines (Mare Island, Cal.).....Lt. Cmdr., U.S.N.R.
Maloney P. J., Des Moines (Fort Lewis, Wash.) 1st Lt., A.U.S.
Marquis, G. S., Des Moines (Great Lakes, Ill.).....Lt. Cmdr., U.S.N.R.
Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.
Mauritz, E. L., Des Moines (Camp Gruber, Okla.) 1st Lt., A.U.S.
McCoy, H. J., Des Moines (Iowa City, Iowa).Lt. Cmdr., U.S.N.R.
McDonald, D. J., Des Moines (March Field, Cal.).Capt., A.U.S.
McNamee, J. H., Des Moines (Seattle, Wash.).....Lt. Cmdr., U.S.N.R.
Mencher, E. W., Des Moines.....1st Lt., A.U.S.
Merkel, B. M., Des Moines (Tullahoma, Tenn.)..Major, A.U.S.
Morden, R. P., Des Moines.....1st Lt., A.U.S.
Murphy, J. H., Des Moines (San Diego, Cal.) Lt. (sg), U.S.N.R.
Nelson, A. L., Des Moines (Camp Livingston, La.) Capt., A.U.S.
Noun, L. J., Des Moines (Great Lakes, Ill.)..Lt. (jg), U.S.N.R.
Noun, M. H., Des Moines.....Major, A.U.S.
Nourse, M. H., Des Moines (Bethesda, Md.)..Lt. (jg), U.S.N.R.
Patton, B. W., Des Moines (Camp Robinson, Ark.).....1st Lt., A.U.S.
Pearlman, L. R., Des Moines (APO Seattle, Wash.).....1st Lt., A.U.S.
Peisen, C. J., Des Moines (Fort Perry, Ohio)..1st Lt., A.U.S.
Penn, E. C., West Des Moines (Spokane, Wash.).....1st Lt., A.U.S.
Pfeiffer, E. P., Des Moines (Springfield, Mo.)....Capt., A.U.S.
Phillips, A. B., Des Moines (Corpus Christi, Texas).....Lt. (sg), U.S.N.R.
Porter, R. J., Des Moines (Santa Ana, Cal.)..1st Lt., A.U.S.
Powell, L. D., Des Moines (Long Beach, Cal.)..Cmdr., U.S.N.R.
Pratt, E. B., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Priestley, J. B., Des Moines (Camp Carson, Colo.).Major, A.U.S.
Purdy, W. O., Des Moines (Camp Livingston, La.)..Capt., A.U.S.
Riegelman, R. H., Des Moines (Randolph Field, Texas).....1st Lt., A.U.S.
Robinson, V. C., Des Moines (Tampa, Fla.)....Capt., A.U.S.
Rotkow, M. J., Des Moines (El Paso, Texas)..1st Lt., A.U.S.
Schaeferle, M. J., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Schlaser, V. L., Des Moines (Chicago, Ill.)..Lt. (jg), U.S.N.R.
Shepherd, L. K., Des Moines (APO New York, N. Y.).....1st Lt., A.U.S.
Shifler, H. K., Des Moines (APO New York, N. Y.).Capt., A.U.S.
Singer, P. L., Des Moines (Camp Grant, Ill.)..1st Lt., A.U.S.
Skultety, J. A., Des Moines (Staten Island, N. Y.).....1st Lt., U.S.P.H.S.
Smead, H. H., Des Moines (Wichita Falls, Texas).....1st Lt., A.U.S.
Smith, H. J., Des Moines.....Lt. (sg), U.S.N.R.
Smith, R. T., Des Moines (Meridian, Miss.)....1st Lt., A.U.S.
Snodgrass, R. W., Des Moines (Fort Rosecrans, Cal.).....Capt., A.U.S.
Snyder, G. E., Grimes (Camp Robinson, Ark.)....1st Lt., A.U.S.
Sohm, H. A., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. Cmdr., U.S.N.R.
Sorensen, R. M., Des Moines (Topeka, Kan.).Major, U.S.P.H.S.
Springer, F. A., Des Moines (Treasure Island, Cal.).....Lt. Cmdr., U.S.N.R.
Stearns, A. B., Des Moines (Denver, Colo.)..Major, A.U.S.
Stickler, Robert, Des Moines (Fort Benning, Ga.) 1st. Lt., A.U.S.
Stitt, P. L., Des Moines (Great Lakes, Ill.)....Lt. (jg) U.S.N.R.
Throckmorton, J. F., Des Moines (Camp Howze, Texas).....Capt. A.U.S.
Toubes, A. A., Des Moines (Greenville, Miss.)..1st Lt., A.U.S.
Turner, H. V., Des Moines (Hot Springs, Ark.)..1st Lt., A.U.S.
Updegraff, Thomas, Des Moines (Spokane, Wash.).1st Lt., A.U.S.
Vaubel, E. K., Des Moines (Portland, Ore.).....Capt., A.U.S.
Wagner, E. C., Des Moines (Washington, D. C.)..1st Lt., A.U.S.
Willett, W. M., Des Moines (Fort Bragg, N. C.)..1st Lt., A.U.S.
Wirtz, D. C., Des Moines (Great Lakes, Ill.).Lt. Cmdr., U.S.N.R.
Zarchy, A. C., Des Moines (Camp Cook, Cal.).....Capt., A.U.S.

Pottawattamie County

Beaumont, F. H., Council Bluffs (APO New York, N. Y.).....Major, A.U.S.
Cogley, J. P., Council Bluffs (APO Los Angeles, Cal.).....Capt., A.U.S.
Collins, R. M., Council Bluffs (San Diego, Cal.)..1st Lt., A.U.S.
Dean, A. M., Council Bluffs (Pensacola, Fla.).....Lt. Cmdr., U.S.N.R.
Hennessy, J. D., Council Bluffs (Chicago, Ill.).1st Lt., A.U.S.
Jensen, A. L., Council Bluffs (APO San Francisco, Cal.).....Lt. Col., A.U.S.
Klok, G. J., Council Bluffs (Athol, Idaho)....Lt. (jg), U.S.N.R.
Kurth, C. J., Council Bluffs (Camp Crowder, Mo.).1st Lt., A.U.S.
Limbert, E. M., Council Bluffs (Camp Carson, Colo.).....Capt. A.U.S.
Maiden, S. D., Council Bluffs (San Francisco Cal.).....Major, A.U.S.
Martin, L. R., Council Bluffs (APO Los Angeles, Cal.).....Capt., A.U.S.
Moskovitz, J. M., Council Bluffs (Camp Lockett Cal.).....Capt., A.U.S.
Sternhill, Isaac, Council Bluffs (Fort Warren, Wyo.).....Capt., A.U.S.
Tinley, R. E., Council Bluffs (APO New York, N. Y.).....Capt., A.U.S.
Treynor, J. V., Council Bluffs (South Bend, Ind.).....Lt. Cmdr., U.S.N.R.
Wieseler, R. J., Avoca (McChord Field, Wash.).....A.U.S.
Wurl, O. A., Council Bluffs (APO New York, N. Y.).....Capt., A.U.S.

Poweshiek County

Brobyn, T. E., Grinnell (Camp San Luis Obispo, Cal.).....Capt., A.U.S.
Hickerson, L. C., Brooklyn (Oxnard, Cal.).....1st. Lt., A.U.S.
Korfmacher, E. S., Grinnell (San Francisco, Cal.).....Capt., A.U.S.
Niemann, T. V., Brooklyn (Camp Shelby, Miss.).....1st Lt., A.U.S.
Parish, J. R., Grinnell (Treasure Island, Cal.).....Lt. Cmdr., U.S.N.R.

Ringgold County

Seaman, C. L., Mount Ayr (Van Buren, Ark.)..Capt., A.U.S.

Sac County

Bassett, G. H., Sac City (San Diego, Cal.)..Lt. Cmdr., U.S.N.R.
Deters, D. C., Schaller (APO New York, N. Y.)..Capt., A.U.S.
Evans, W. I., Sac City (Camp Hood, Texas)..1st Lt., A.U.S.
Klocksiem, R. G., Odebolt (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Neu, H. N., Sac City (Jefferson Barracks, Mo.)...Capt., A.U.S.

Scott County

Baker, R. W., Davenport (Rock Island, Ill.)..1st Lt., A.U.S.
Balzer, W. J., Davenport (APO Seattle, Wash.)..1st Lt., A.U.S.
Block, L. A., Davenport (APO New York, N. Y.)..Major, A.U.S.
Bishop, J. F., Davenport (APO Seattle, Wash.)..1st Lt., A.U.S.
Boden, W. C., Davenport (Biloxi, Miss.).....Capt., A.U.S.
Brown, D. H., Davenport.....Capt., A.U.S.
Brown, M. J., Davenport (Pando, Colo.).....Capt., A.U.S.
Carey, E. T., Davenport (Fort Devons, Mass.)..1st Lt., A.U.S.
Christiansen, C. C., Dixon (APO San Francisco, Cal.) .....1st Lt., A.U.S.
Cummins, G. M., Jr., Davenport.....1st Lt., A.U.S.
Decker, C. E., Davenport (Oklahoma City, Okla.) .....1st Lt., A.U.S.
Evans, H. J., Davenport (Colorado Springs, Colo.).Capt., A.U.S.
Gibson, P. E., Davenport (Palm Springs, Cal.).....Capt., A.U.S.
Hurevitz, H. M., Davenport (Fort Lewis, Wash.)..Capt., A.U.S.
Hurteau, Everett, Davenport (APO New York, N. Y.) .....1st Lt., A.U.S.
Hurteau, W. W., Davenport (Camp Barkeley, Texas) .....Major, A.U.S.
Kimberly, L. W., Davenport (New Orleans, La.).Capt., A.U.S.
LaDage, L. H., Davenport (Camp Campbell, Ky.)..Capt., A.U.S.
Lorfeld, G. W., Davenport (Fort Myers, Fla.)....Capt., A.U.S.
Marker, J. I., Davenport (Camp Carson, Colo.)..Col., A.U.S.
McMeans, T. W., Davenport (APO New York, N. Y.) .....1st Lt., A.U.S.
Neufeld, R. J., Davenport (Rock Island, Ill.)..1st Lt., A.U.S.
Shafer, A. W., Davenport (Camp Shelby, Miss.)..1st Lt., A.U.S.
Sheeler, I. H., Davenport (Omaha, Neb.).....1st Lt., A.U.S.
Sorenson, A. C., Davenport (Oakland, Cal.)..Lt. Cmdr., U.S.N.R.
Sunderbruch, J. H., Davenport (Paris, Texas)....1st Lt., A.U.S.
Weinberg, H. B., Davenport (Fort Benning, Ga.)..Major, A.U.S.
Zukerman, C. M., Bettendorf (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.

Shelby County

Bisgard, C. V., Harlan (Farragut Air Base, Idaho) .....Lt. Cmdr., U.S.N.R.
Griffith, W. O., Shelby.....A.U.S.

Sioux County

Gleysteen, R. R., Alton (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Grossmann, E. B., Orange City (Fort Sam Houston, Texas) .....1st Lt., A.U.S.
Larsen, M. O., Hawarden (Camp Robinson, Ark.)..Major, A.U.S.

Story County

Conner, J. D., Nevada (Camp Robinson, Ark.)....1st Lt., A.U.S.
Fellows, J. G., Ames (Carlisle Barracks, Penn.).Capt., A.U.S.
Lekwa, A. H., Story City (San Diego, Cal.)..Lt. Cmdr., U.S.N.R.
McFarland, G. E., Jr., Ames (San Diego, Cal.) .....Lt. Cmdr., U.S.N.R.
McFarland, J. E., Ames (Farragut Air Base, Idaho) .....Lt. (jg) U.S.N.R.
Rosebrook, L. E., Ames (Randolph Field, Texas).1st Lt., A.U.S.
Sperow, W. B., Nevada (San Diego, Cal.)..Lt. Cmdr., U.S.N.R.
Thorburn, O. L., Ames (Las Vegas, Nevada)..Major, A.U.S.

Tama County

Boller, G. C., Traer (Fort Leonard Wood, Mo.)
Dobias, S. G., Chelsea (APO Seattle, Washington)
Havlik, A. J., Tama (Fleet PO, San Francisco, Cal.)..... .....Lt. (sg), U.S.N.R.
Roberts, C. R., Dysart (San Diego, Cal.)
Schaeferle, L. G., Gladbrook (Fort Leonard Wood, Mo.)
Standefer, J. M., Tama (San Diego, Cal.)

Taylor County

Hardin, J. F., Bedford (Fort Leonard Wood, Mo.)

Union County

Paragas, M. R., Creston (Avon Park, Fla.).....Capt., A.U.S.
Ryan, C. J., Creston (Scribner, Neb.).....1st Lt., A.U.S.

Wapello County

Brentan, Emanuel, Ottumwa (Moline, Ill.)
Brody, Sidney, Ottumwa
Gilfillan, C. D. N., Eldon (Battle Creek, Mich.)
Hughes, R. O., Ottumwa (San Diego, Cal.)
Nelson, F. L., Jr., Ottumwa
Prewitt, L. H., Ottumwa
Selman, R. J., Ottumwa (El Paso, Texas)
Struble, G. C., Ottumwa (Fort Harrison, Ind.)
Whitehouse, W. N., Ottumwa

Warren County

Fullgrabe E. A., Indianola (Bethesda, Md.) Lt. (jg), U.S.N.R.
Shaw, E. E., Indianola (Fort Sill, Okla.).....Capt., A.U.S.
Trueblood, C. A., Indianola (Camp Campbell, Ky.) 1st Lt., A.U.S.

Washington County

Boice, C. L., Washington (Pensacola, Wash.) Lt. (jg), U.S.N.R.
Droz, A. K., Washington (Grosse Ile, Mich.).Lt. Cmdr., U.S.N.R.
Mast, T. M., Washington (Sioux Falls, S. D.) Lt. (jg), U.S.N.R.
Stutsman, R. E., Washington (Pensacola, Fla.) .....Lt. (sg), U.S.N.R.
Ware, S. C., Kalona (Fort Meade, Md.).....1st Lt., A.U.S.

Wayne County

Hyatt, C. N., Jr., Humeston (Indio, Cal.).....Capt., A.U.S.

Webster County

Baker, C. J., Fort Dodge (Camp Claiborne, La.).....Capt., A.U.S.
Burch, E. S., Dayton (Camp Livingston, La.).....Capt., A.U.S.
Burleson, M. W., Fort Dodge.....Major, A.U.S.
Coughlan, C. H., Fort Dodge (Jefferson Barracks, Mo.) .....Major, A.U.S.
Joyner, N. M., Fort Dodge (Brooklyn Field, Ala.)
Kluever, H. C., Fort Dodge.....Lt. Cmdr., U.S.N.R.
Larsen, H. T., Fort Dodge (Newport R. I.).....Lt. (jg), U.S.N.R.
Shrader, J. C., Fort Dodge (Camp Young, Cal.)....Major, A.U.S.
Thatcher, O. D., Fort Dodge (Kelly Field, Texas)..1st. Lt., A.U.S.
Thatcher, W. C., Fort Dodge.....Capt., A.U.S.
Van Patten, E. M., Fort Dodge.....1st Lt., A.U.S.

Winneshiek County

Fritchen, A. F., Decorah (APO San Francisco, Cal.)....U.S.N.R.
Hospodarsky, L. J., Ridgeway (Seattle, Wash.)..Capt., A.U.S.
Larson, L. E., Decorah
Van Besien, G. J., Decorah (Fort Leavenworth, Kan.)

Woodbury County

Bettler, P. L., Sioux City (APO San Francisco, Cal.) .....Major, A.U.S.
Blackstone, M. A., Sioux City (Pittsburg, Cal.).1st Lt., A.U.S.
Boe, Henry, Sioux City (Salina, Kan.).....Capt., A.U.S.
Burroughs, H. H., Sioux City.....Lt. (jg), U.S.N.R.
*Cmeyla, P. M., Sioux City (APO San Francisco, Cal.) .....Capt., A.U.S.
Crowder, R. E., Sioux City (San Diego, Cal.) Lt. Cmdr., U.S.N.R.
Dimsdale, L. J., Sioux City (Camp Claiborne, La.).1st Lt., A.U.S.
Down, H. I., Sioux City (Camp Breckenridge, Ky.) Major, A.U.S.
Elson, V. J., Danbury (APO Seattle, Wash.)
Frank, L. J., Sioux City (Mare Island, Cal.).Lt. Cmdr., U.S.N.R.
Graham, J. W., Sioux City (San Diego, Cal.).Lt. Cmdr., U.S.N.R.
Grossman, Milton, Sioux City (Hobbs, N. M.)..Capt., A.U.S.
Heffernan, C. E., Sioux City (Salt Lake City, Utah) .....1st Lt., A.U..S
Hicks, W. K., Sioux City (Fort Riley, Kan.)..Major, A.U.S.
Honke, E. M., Sioux City (Palm Springs, Cal.)..Capt., A.U.S.
Kaplan, David, Sioux City (Fort Bragg, N. C.)..1st Lt., A.U.S.
Knott, R. C., Sioux City (New York, N. Y.)....Capt., A.U.S.
Krigsten, W. M., Sioux City (Springfield, Mo.)..Lt. Col., A.U.S.
Martin, R. F., Sioux City (Camp Atterbury, Ind.).1st Lt., A.U.S.
Mattice, L. H., Danbury (Camp Livingston, La.) .....1st Lt., A.U.S.
McCuistion, H. M., Sioux City (APO New York, N. Y.) .....Capt., A.U.S.
Mugan, R. C., Sioux City (Gowen Field, Idaho)..1st Lt., A.U.S.
Osincup, P. W., Sioux City (Sioux City Air Base, Iowa) .....1st Lt., A.U.S.
Rarick, I. H., Sioux City (Soquel, Cal.).....1st Lt., A.U.S.
Reeder, J. E., Jr., Sioux City (Modesto, Cal.)....Capt., A.U.S.
Ryan, M. J., Sioux City (Topeka, Kan.).....Capt., A.U.S.
Schwartz, J. W., Sioux City (Camp Crowder, Mo.).Major, A.U.S.
Tracy, J. S., Sioux City (Salt Lake City, Utah)....Capt., A.U.S.
Wilson, L. L., Sioux City (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.

Worth County

Westley, G. S., Manly (Camp Forrest, Tenn.)..Major, A.U.S.

Wright County

Aageson, C. A., Dows
Bird, R. G., Clarion (San Diego, Cal.).....Lt. Cmdr., U.S.N.R.
Doles, E. A., Clarion (Phoenix, Ariz.)
Leinbach, S. P., Belmond (Farragut Air Base, Idaho)
Missildine, W. H., Eagle Grove (APO San Francisco, Cal.) ..... Capt., A.U.S.

(*) Reported missing in action.

In response to several requests the JOURNAL compiled this roster of Iowa physicians in military service, giving their respective ranks and locations wherever possible. Many of the county society secretaries responded to our plea for assistance in collecting the information for this list and we are deeply grateful to them. It is hoped that the county secretaries or the doctors themselves will keep us informed regarding any additions or changes in rank or location in order that this roster may be as accurate as possible and to insure the prompt delivery of their JOURNALS.

SPEAKERS BUREAU ACTIVITIES

PROGRAM FOR 1943

During the coming year the Speakers Bureau wishes to continue its efforts in postgraduate medical education, although the type of work must of necessity be somewhat altered.

Our library of recorded medical lectures will be at the disposal of all medical groups, whether they are county, hospital, or local medical societies. In the main these scientific transcriptions have been made by nationally known men. Although they do not afford the intimate personalities of these men, they do contain the latest thoughts of great minds on the particular subject recorded. It is hoped that their use may continue to increase as greatly next year as during the past year. Application for the recorded medical lectures should be made a reasonable time in advance. When this is not feasible, however, every possible effort will be made to comply with your requests.

The Bureau is able to secure excellent moving pictures dealing with many medical and surgical subjects. Some of these are obtained through the American College of Surgeons and the American Medical Association, as well as through clinics and certain individuals. Should you be interested in a film on a given subject, the Bureau will be pleased to locate it, and when possible, make arrangements for its loan. When a projector is necessary, we may be able to obtain one. It will, of course, be necessary to make the plans some time prior to your meeting.

The Bureau will be pleased to submit to any medical group a proposed course of six or eight programs embodying either one or both of these features. We regret that because of present conditions postgraduate medical courses as previously offered will be discontinued until after the war.

The radio broadcasts over WOI and WSUI will be continued in 1943 as usual. We appreciate the excellent response we have had from the physicians whom we have requested to prepare these talks. This type of education is expedient in furthering the health and welfare of our people, and we know we can depend upon you in the future as we have in the past. On these broadcasts we also have announcements about smallpox and diphtheria and about safety on the highway. The number of smallpox cases in Iowa has been greatly decreased this past year, partially through our efforts as well as those of others. But we must not relent in our campaign publicizing smallpox and diphtheria until these conditions and the simple measures of their eradication are well understood by all Iowans.

We wish to extend our greetings for a happy and prosperous New Year. The Committee is deeply grateful for all the cooperation and help you have displayed during the past year, and we shall be pleased to have you call upon us whenever we can be of service.

RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.
WOI—Wednesdays at 2:05 p. m.

January	4- 6	Conserve Your Doctor's Health Herbert E. Stroy, M.D.
January	11-13	The Treatment of Pneumonia Smith C. Kirkegaard, M.D.
January	18-20	The Use of Vitamins George E. Mountain, M.D.
January	25-27	Rheumatic Fever Robert L. Jackson, M.D.

SCIENTIFIC RECORDING SCHEDULED FOR THE MONTH OF JANUARY

Wayne County Medical Society Corydon—8:00 p. m.	January 12	The Making of a Diagnosis David P. Barr, M.D., St. Louis

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. F. W. MULSOW, Cedar Rapids
President-Elect—MRS. W. S. REILEY, Red Oak
Secretary—MRS. A. G. FELTER, Van Meter
Treasurer—MRS. A. E. MERKEL, Des Moines

MEETING OF THE BOARD OF DIRECTORS OF THE WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION

The midyear meeting of the Board of Directors of the Woman's Auxiliary to the American Medical Association was held November 20, 1942, at the Palmer House in Chicago. Thirteen officers, directors, and committee chairmen and nineteen state presidents answered to roll-call. Mrs. Eben Carey, president-elect, was an honored guest.

Mrs. Frank N. Haggard, president, gave an interesting report and stressed our theme, "Health for Victory." She urged us to be continually aware of the purpose for which we were organized, and stated we should strive to maintain our own health, the health of the community, and our morale.

Mrs. George Dillinger, *Hygeia* chairman, also stressed "Health for Victory," and exhibited the new handbook. She urged more subscriptions this year and discussed the importance of *Hygeia* to the public during the absence of our physicians in service. She stated the Michigan Auxiliary has sent subscriptions of *Hygeia* to their legislators.

Miss Margaret Wolfe, secretary at the central office, who has supervision of the *Bulletin*, reported 884 subscriptions and 433 renewals and stated ten copies were being sent to each state president for distribution. She said it was hoped the subscription list would be increased this year.

Mrs. Will Hibbitts, program chairman, reviewed the program outline, which offers a wealth of suggestions to suit any community. She stressed nutrition, which is of utmost importance at this time, and "Be Informed," copies of which may be obtained from the Central Office, 410-43 East Ohio Street, Chicago, Illinois.

Mrs. Luther Kice, legislative chairman, recommended that the Auxiliaries strive to keep alert with medical enactments. She also urged all states to end their year at the same time as the National Auxiliary.

The state reports were interesting and all auxiliaries seemed to be doing various forms of defense work. It was voted to purchase a thousand dollar war bond.

Dr. W. W. Bauer, Director of the Bureau of Health Education of the American Medical Association, was guest speaker at the luncheon. He announced the new radio series, "Doctors at War," which will begin December 26 at 4:00 p. m. central war time. These broadcasts will be presented by the American Medical Association and National Broadcasting Company, with the official collaboration of the Medical Department of the Army of the United States and the Bureau of Medicine and Surgery of the United States Navy. All members should interest the public in the broadcasts and place posters in public places.

Clipping Loan Collections on health topics can be obtained by addressing the *Hygeia* Loan Bureau, Health Education, American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

The Annual Board Meeting will be held June 7, 8, and 9, 1943, at the Drake Hotel in Chicago.

Mrs. F. W. Mulsow, President

PROGRAM SUGGESTIONS FOR 1942-1943

"The Doctor's Wife in War Time"

Developments the past year have altered our activities, increased our responsibilities, and brought us face to face with new problems. In our endeavor to "keep in step" with the war program, we are stressing "service" as it relates to our Auxiliary activities and are urging all members to combine their efforts in formulating programs on timely topics. It is suggested that at least one of the following outlines be followed through as an Auxiliary program and then presented to some local group:

1. *Immunization*
   a. The President's Proclamation.
   b. The Story of Smallpox.
   c. Why an Immunization Program?
   d. Legislation required.
   References: *Hygeia*, March, 1942; Iowa State Department of Health pamphlets; State Medical Library; Educational Health Circular No. 37; Illinois Department of Health; also see Iowa State Traveling Library list of references.

2. *Nutrition*
   a. Discussion: "Nutrition Facts and Fallacies."
   b. Talk: "Common Sense in Nutrition."
   c. Book Review: "Nutrition and Physical Fitness" or "Accepted Foods and Their Nutritional Value."

References: Family Nutrition (100 page pamphlet) published by Philadelphia Child Health Society; Nutrition and Physical Fitness, by Lotta Bogert (Price $3.00); Accepted Foods and Their Nutritional Value, published by the American Medical Association. (It is suggested that the donation of a volume of one of the above books to the school or library would be acceptable and in order.)

Note: Since the problem of nutrition has become one of national interest and major importance, we cannot be indifferent or relax our interest in the promotion of an authentic nutrition program. A well planned and approved program open to the public is suggested as an Auxiliary contribution to this timely subject.

3. *Medical Progress and Public Welfare in Latin America*

References: For program material see special articles in the *Journal of the American Medical Association* and also write to the State Medical Library.

4. *Mental Hygiene*

References: A program outline and bibliography will be sent if requested.

5. *Inflation—and How to Prevent It*

a. Important to know:
What inflation means.
Its causes.
How to prevent it.
What we can do to prevent it.

b. Important to study:
Price control.
What is covered in the new price order.
What is not covered.
Why a price order became necessary.
How we can make it work.
Rent control.

c. Important to understand:
The problems of the retailer.
The quality of merchandise.
The necessity of consumers' centers.

References: How to Check Inflation (pamphlet, price 10c) from the Public Affairs Committee, 30 Rockefeller Plaza, New York City; What Wartime Price Control Means to You (free) from Office of Price Administration, Washington, D. C.

6. *Home Nursing*

a. The Florence Nightingale Pledge—by a member.
b. Discussion: "Volunteers Increase Nurse Power."
c. Book Review: "The History of Nursing."
d. Magazine Article: "The Army Needs Nurses."

References: The History of Nursing, by Dock and Stewart; Facts About Nursing; Nursing and How to Prepare for It; Nursing—a Profession; (All pamphlets which may be secured from the Nursing Information Bureau, 1790 Broadway, New York City; *The Journal of the American Medical Association; American Journal of Nursing.*

Note: The American Red Cross Bulletin brings out this fact: "Because of the large number of nurses now serving with the armed forces, there is a very real shortage of professional nursing care throughout the country." With this in mind the above program is suggested for the purpose of stimulating interest in the Home Nursing Courses and leading Auxiliary members to encourage and assist properly qualified young women to enroll in the nursing profession.

7. *The Doctor's Contribution to the War*
8. *Legislation*
9. *Community Interests—Social and Civic*
10. *The Annual Check-Up*

(Program outlines and reference material for 7, 8, 9 and 10 will be furnished on request.)

POINTS UPON WHICH AWARDING OF THE GERTRUDE DOWNING TROPHY WILL BE BASED

No organization can remain static in times like these and expect the continued support of its members. The war and its many allied problems affect all of us in our everyday life, and in turn make new demands upon our organizations. Realizing that fact, the Woman's Auxiliary to the Iowa State Medical Society has revised the basis upon which the Gertrude Downing trophy is awarded, and below are the different points upon which each county auxiliary will be judged:

1. War Service—USO, Red Cross, Home Nursing, Volunteer Nurses Aides and First Aid ..... 15 points
2. Contributions to the Nurses Loan Fund 15 points
3. Dues paid on time..... 10 points
4. Community Service ..... 10 points
5. Read the *Bulletin* responsively in your local Auxiliary or other organizations.. 10 points
6. Procure a doctor, nurse, teacher or some other informed person to give a short talk on the value of vaccination in the prevention of smallpox before any organization in your community..... 10 points
7. If possible, have a physician demonstrate the modern pressure method of vaccination before a community group 10 points
8. Cooperate with your local medical society and the State Department of Health in immunization week..... 10 points
9. Receipt of Merit Award for regular individual purchases of War Bonds and Stamps ..... 10 points

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NURSES LOAN FUND

Has your Auxiliary made its contribution to our Nurses Loan Fund this year? If not, do plan to do so early in 1943. Madison County recently sent in

$5.00; Dallas-Guthrie added $1.00 to their fine donation; and many individual donors have made the fund grow. Polk County arranged a bridge benefit on December 1 and cleared $32.65.

All members should try to interest girls in their community to enter nurses training when the next class begins. Our government needs many nurses, and let's do all we can to help them.

Mrs. W. R. Hornaday, Chairman

NURSES AIDE PROGRAM†*

Shortage of nurses and doctors in Iowa, caused by ever increasing demands of war, brings the Nurses Aide Program of the American Red Cross to the forefront.

To date in Iowa, 333 women have received Nurses Aide certificates. Should enemy attack, sabotage, an epidemic, or a natural disaster create an emergency, these trained women are ready to step into hospitals to relieve the regular nurses of some of their simpler duties, such as making beds, giving baths, taking temperature, pulse, and respiration.

Thirty-six Iowa hospitals are using the services of Nurses Aides. Many others, including one hospital of the Veterans Administration, have need for their assistance.

Enrollment of Iowa women in Nurses Aide courses totals 269, and a campaign is now on to enroll as many aides as possible. The great need for their services must be met! Among qualifications for enrollment are satisfactory physical condition, and a high school education or its equivalent.

After receiving her certificate, the Nurses Aide must give at least 150 hours of service a year without pay. This period of training is under supervision of graduate nurses in a hospital ward, an emergency field hospital, a blood donor center, a public health agency, or a clinic. The course consists of eighty hours of instruction and supervised practice in care of the sick in hospitals. In addition to this, each aide must take the Standard Red Cross First Aid course within the first year after certification. The Red Cross recommends that all Nurses Aides be inducted into the Citizens Defense Corps so that they will be fully authorized to serve in that corps in case of enemy action.

The increasing tempo of the Red Cross Nurses Aide Program is evident in the following comparative figures:

	July, Aug. Sept., 1941	July, Aug. Sept., 1942
Number of Hospitals Using or Training Red Cross Nurses Aides	69	1,310
Number Students Enrolled	399	42,000

Since July 1, 1941, more than 35,800 Nurses Aide certificates have been issued in the United States.

"Hospitals which at first were reluctant to accept the Red Cross Nurses Aide Program, now are enthusiastic about it," Colonel George Baehr, chief medical officer of the Office of Civilian Defense, told a session of the American Hospital Association at its recent convention in St. Louis.

Dr. Charles P. Taft, assistant director of United States Defense Health and Welfare Service, told the association that hospitals in the United States are using one Nurses Aide to 1.2 graduate nurses, while those in Great Britain are using four Nurses Aides to every one graduate nurse. He emphasized the vital and increasing need for accelerating the present Nurses Aide Program.

(Next month—Home Nursing)

†From the American Red Cross, Public Information Service.

*Previous article, Volunteer Nurses Aide Corps, appeared in the editorial section of the December issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

INFORMATION REGARDING FEDERAL LEGISLATION

Allocation of Physicians: The Subcommittee on Manpower of the Senate Committee on Education and Labor has submitted a report to the full committee with respect to the supply of physicians available to meet military, industrial, and civilian needs. The committee felt speedy action was imperative to prevent immediate peril to the health of the nation and stressed the following facts:

"1. A disjointed procurement policy in the military services, under which voluntary and involuntary induction occurs with various military units competing for the very limited supply of doctors available for wartime America, has resulted in hoarding and freezing unused doctors in the American armed forces in a ratio double that of the British.

"2. Serious dislocation of medical manpower throughout the nation, because the ill supplied rural areas are contributing twice and sometimes four times the proportion of doctors coming from urban areas, threatens doctor famines in vast rural areas.

"3. A tremendous unnecessary over-militarization of the doctor supply may exist at the expense of the civilian population.

"The conditions are so acute and dangerous that this preliminary report is made public with the recommendation that at the earliest possible moment the following steps should be taken: (a) The President, as Commander-in-Chief, should order a survey to be made of over-supply and under-supply of medical personnel for both the armed forces and civilian needs. (b) A reallocation should be made wherever it is determined an over or under-supply exists. (c) Instruction should be given to the War Manpower Commission to cease its procurement drive for doctors in states where quotas have already been attained.

"From information presented to the Committee it appears that prior to the induction of doctors into the armed forces the national average was about one doctor for every eleven hundred individuals.

"Quotas were fixed by the Procurement and Assignment Service for every state. The combination of draft and recruiting team activity has removed in certain southern states nearly 200 per cent of the quota while in certain northern states less than 50 per cent of the quota has been inducted.

"If the information supplied this committee is accurate, approximately one-third of the medical effectives of the country are now in the armed forces. According to information received by the committee, the military services desire to maintain their present ratio of approximately one doctor for every 100 men in service.

"If the present ratio of doctors to men in service is maintained, we shall have two out of three doctors in military service in 1943 and an average of one doctor for every 3,000 or more civilians."

The Revenue Act of 1942: The new law remedies the unjust method of taxation that has heretofore prevailed in connection with the uncollected accounts on the books of a taxpayer at the time of death. Hereafter the value of such accounts will not be added to the income of the taxpayer for the year of death. This change will result in a considerable saving to the estates of physicians.

Narcotics: The Treasury-initiated bill, H. R. 7568, has passed the House, providing for the domestic control of the production and distribution of the opium poppy and its products. In recent months there has been a rather widespread move to promote the growth of the opium poppy, particularly on the west coast. Persons agitating for the growth of the poppy are primarily interested from the standpoint of the production of poppy seed for bakery purposes. The pod, which contains the seed, and stems of the poppy plant are a source material for morphine, which may be extracted by the simple process of boiling such pods and stems. Any locality in which the opium poppy is grown would be particularly attractive to the drug addict.

Opium supplies in this country are not inexhaustible, and in the event it should become impossible to obtain further supplies of raw opium in the Near East, it would be imperative that this country resort to domestic production of the opium poppy to furnish morphine and other narcotic drugs to supply military and civilian needs. In the event it should become necessary to produce the opium poppy in this country, the bill under consideration provides for an orderly and strict control of such production, either by or under the supervision of the Government. If domestic production should become necessary, it must be accomplished under conditions which will not allow for the spread of drug addiction.

Mrs. J. A. Downing, Chairman, Legislative Committee

BOOK NOTES

The following excerpts are from *What the Citizen Should Know About Wartime Medicine* by Lieutenant Colonel J. R. Darnall, M.C., and V. I. Cooper. Colonel Darnall is executive officer of the Walter Reed Hospital, Army Medical Center; and V. I. Cooper has had many years of experience as an editor of well-known medical journals. There is no phase of war medicine in or out of the field of combat which is not discussed in terms comprehensible to the layman.

"Wartime medicine represents the concerted effort of the medical doctor and his allies—the dentist, sanitary expert, pharmacist, veterinarian, and nurse —to cope with the greatly increased health hazards that are the accompaniments of war . . ."

"Early in World War I a study of British air casualties revealed that of every hundred flyers who met violent death only two were killed by the enemy, eight died because of the mechanical failure of their craft, while ninety deaths were the result of the pilots' own deficiencies. It was found that frequently men were assigned to aviation after they had become unfit for ground service . . ."

"Time is often a determining factor, when delay may mean death. Plasma may be administered at aid stations on the battlefield, thus saving many lives that would otherwise have to be transported to the rear before receiving transfusions. Nevertheless, to make blood transfusions more quickly available when blood is used instead of plasma, every soldier and sailor now carries an identification tag on which his blood group is marked.

"Wartime doctors, returning to their homes when peace comes, must take up the broken threads of their civilian careers and resume the medical activities in which they were previously engaged. Many will have acquired new knowledge in their chosen specialties. Others will have developed a broadened perspective and wisdom as a result of numerous wartime contacts, responsibilities, and experiences. All will have the satisfaction of having served their country and their fellow men at a time when their technical skill and knowledge were indispensable.

"Some doctors will remain in the army, others in the navy. Others will continue in the field of aviation medicine, conducting the physiologic research that the present war has indicated must be carried on in the future, or as Flight Surgeons in the service of commercial airlines that will inevitably extend their distances as a result of war. A much larger number will become identified with industry, combining general practice with preventive psychiatry.

"Only a small percentage of the nation's demobilized doctors will enter the service of the Veterans Administration. Many more will go into public health work, for the indications are that the medical program of the postwar period will be a greatly expanded one in which preventive medicine will play a much more extensive role than it has in the past."

Mrs. K. M. Chapler

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.

WOI—Wednesdays at 2:05 p. m.

January	4- 6	Conserve Your Doctor's Health Herbert E. Stroy, M.D.
January	11-13	The Treatment of Pneumonia Smith C. Kirkegaard, M.D.
January	18-20	The Use of Vitamins George E. Mountain, M.D.
January	25-27	Rheumatic Fever Robert L. Jackson, M.D.

SOCIETY PROCEEDINGS

Adair County

Members of the Adair County Medical Society and their wives met Tuesday, December 8, in Greenfield. Following dinner the annual election of officers was held with the following results: Dr. Ralph E. Wiley of Fontanelle, president, and Dr. Arthur S. Bowers of Orient, secretary and treasurer. Various problems confronting the welfare of the county society were discussed and action taken to establish procedures for guidance.

A. S. Bowers, M.D., Secretary

Adams County

The Adams County Medical Society met Tuesday, December 8, in Corning. Officers elected to serve during the coming year include: Dr. Frederick Binder of Corning, president; Dr. Amos W. Brunk of Prescott, vice president; and Dr. J. H. Wallahan of Corning, secretary and treasurer.

Black Hawk County

Officers elected to serve the Black Hawk County Medical Society for 1943 are: Dr. Emery E. Magee, president-elect; Dr. Henry A. Bender, vice president; Dr. Sterling A. Barrett, secretary; Dr. George C. Murphy, treasurer; Dr. Thomas F. Thornton, censor; Dr. Wade O. Preece, trustee; Dr. Magee, delegate; and Dr. James F. Gerken, alternate. Dr. John L. Kestel was inducted as president for the year, having been named president-elect last year. All officers are of Waterloo.

Des Moines County

At a meeting of the Des Moines County Medical Society Tuesday, December 8, in Burlington, the following officers were elected for the coming year: Dr. Elwood P. Russell, president; Dr. Erwin C. Sage, vice president; Dr. Horace F. Hosford, secretary and treasurer; Dr. Frank G. Ober, delegate; and Dr. George B. Crow, alternate. All officers are of Burlington.

E. C. Sage, M.D., Secretary

Dubuque County

At the annual meeting of the Dubuque County Medical Society, which was held at Hotel Julien in Dubuque Tuesday evening, December 8, the following officers were elected for the ensuing year: Dr. John A. Thorson of Dubuque, president; Dr. Frederick Fuerste of Dubuque, first vice president; Dr. Emil F. Mueller of Dyersville, second vice president; Dr. Kenneth K. Hazlet of Dubuque, secretary; Dr. Walter Cary of Dubuque, treasurer; Drs. John M. Walker, Harry A. Stribley, and Henry M. Pahlas, all of Dubuque, board of censors; Dr. Lafe H. Fritz of Dubuque, librarian; Dr. Jesse C. Painter of Dubuque, delegate; and Dr. Frank P. McNamara of Dubuque, alternate.

Franklin County

Dr. W. R. Arthur of Hampton was re-elected president of the Franklin County Medical Society at its dinner meeting Thursday, December 10, in Hampton. Other officers chosen for 1943 are: Dr. Joseph C. Powers, vice president, and Dr. Frank L. Siberts, secretary and treasurer; both doctors are of Hampton.

Iowa County

The Iowa County Medical Society held its annual meeting with a dinner at the Doose Hotel in Marengo Monday, December 7. Officers elected to serve the society during 1943 are: Dr. Edward L. Hollis of Marengo, president; Dr. Thomas D. Clark of Victor, vice president; Dr. Irvin J. Sinn of Williamsburg, secretary and treasurer; Dr. Christian H. Hermann, Jr., of Amana and Dr. Alexander C. McKean of Ladora, censors; Dr. Hollis, delegate; and Dr. Clark, alternate.

Jackson County

Officers elected at the annual meeting of the Jackson County Medical Society include: Dr. Bernard B. Dwyer of Preston, president; Dr. Kermit R. Sorenson of Sabula, vice president; Dr. Frederick J. Swift of Maquoketa, secretary and treasurer; Dr. Edward A. Hanske of Bellevue, delegate; Dr. Owen L. Frank of Maquoketa and Dr. Elmer L. Lampe of Bellevue, censors.

Jasper County

Dr. Raymond F. Frech of Newton was elected president of the Jasper County Medical Society at its annual meeting in Newton Tuesday, December 1, at Hotel Maytag. Other officers named include: Dr. Leon P. Adams, vice president; Dr. Thomas D. Wright, secretary; Dr. James C. Hill, delegate. All officers are of Newton.

Johnson County

The Johnson County Medical Society held its regular monthly meeting at Hotel Jefferson in Iowa City Wednesday, December 2. Following dinner Robert V. Holman, M.D., industrial hygiene physician of the State Department of Health, spoke on A Five Point Industrial Health Program; Mr. Paul J. Houser, industrial hygiene engineer of the State Department of Health, led the discussion. The

annual election of officers resulted as follows: Dr. Raphael J. Hennes of Oxford, president; Dr. Pauline V. Moore of Iowa City, vice president; Dr. Adolph L. Sahs of Iowa City, secretary and treasurer; Drs. Ewen M. MacEwen, George C. Albright, and Andrew W. Bennett, all of Iowa City, delegates; Drs. Milford E. Barnes, Paul A. Reed, and Adolph L. Sahs, all of Iowa City, alternates.

A. L. Sahs, M.D., Secretary

Jones County

Officers elected to serve the Jones County Medical Society during the coming year include: Dr. John D. Paul of Anamosa, president, and Dr. Cecil R. Smith of Onslow, secretary and treasurer.

Lucas County

The Lucas County Medical Society met in Chariton Tuesday evening, December 8. During the business meeting it was voted that all members of the Lucas County Medical Society be made members of the American Medical Association for 1943.

Scott County

The regular monthly meeting of the Scott County Medical Society was held Tuesday evening, December 1, at the Lend-A-Hand Club in Davenport. The guest speaker for the evening was Horace M. Korns, M.D., Professor of Theory and Practice at the State University of Iowa in Iowa City, discussing The Medical Aspects of Chemotherapy.

Henry A. Meyers, M.D., Acting Secretary

Story County

The Story County Medical Society held its annual meeting Thursday, December 17. Officers elected to serve the society during 1943 are: Dr. Arthur N. Schanche of Ames, president; Dr. Albert I. Haugen of Ames, vice president; Dr. William B. Armstrong of Ames, secretary and treasurer; Dr. Earl B. Bush of Ames, delegate; and Dr. Bush Houston of Nevada, alternate.

W. B. Armstrong, M.D., Secretary

Wayne County

The Wayne County Medical Society held its annual meeting at the hospital in Corydon Tuesday, December 8. Dr. David R. Ingraham of Sewal was re-elected president for the coming year.

Woodbury County

The December meeting of the Woodbury County Medical Society was held at the Martin Hotel in Sioux City Thursday, December 17, at 6:30 p. m. The scientific program for the evening included films on Postpartum Hemorrhage and also Suspension of the Uterus.

W. K. Hicks, M.D., Secretary

Iowa Medical Women's Association

The Iowa Medical Women's Association met Tuesday, December 15, with Dr. Virginia D. Thompson of Des Moines. The speaker for the evening was Jeannette Dean-Throckmorton, M.D., of Des Moines, who spoke on Medical Bookplates. Dr. Throckmorton illustrated her presentation with 175 plates from her collection of 700 which are on display at the Iowa State Medical Library.

DEATH NOTICES

Childs, Ratford Frank, of Audubon, aged sixty-eight, died November 19 after a brief illness. He was graduated in 1897 from the University of Nebraska College of Medicine, and at the time of his death was a member of the Audubon County Medical Society.

Lessenger, William Sherman, of Mount Pleasant, aged seventy-four, died November 28 following an extended period of failing health. He was graduated in 1890 from the State University of Iowa College of Medicine, and at the time of his death was a life member of the Henry County and Iowa State Medical Societies.

Melrose, Maurice Carver, of Independence, aged forty-eight, died December 10. He was graduated in 1924 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Buchanan County Medical Society.

Peters, Fletcher Edward, of Defiance, aged sixty-one, died December 6 of a heart ailment with which he had been afflicted for some time. He was graduated in 1904 from Creighton University School of Medicine, and at the time of his death was a member of the Shelby County Medical Society.

AWARD OFFERED BY AMERICAN UROLOGICAL ASSOCIATION

The Journal has been asked to publish the following notice:

"Urology Award—The American Urological Association offers an annual award 'not to exceed $500.00' for an essay (or essays) on the result of some specific clinical or laboratory research in Urology. The amount of the prize is based on the merits of the work presented, and if the Committee on Scientific Research deems none of the offerings worthy, no award will be made. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years.

"The selected essay (or essays) will appear on the program of the forthcoming meeting of the American Urological Association, May 31 to June 3, 1943, Hotel Jefferson, St. Louis, Missouri.

"Essays must be in the hands of the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee, on or before March 1, 1943."

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. FRANK M. FULLER, Keokuk
DR. PAUL E. GARDNER, New Hampton
DR. JOHN T. MCCLINTOCK, Iowa City
DR. HENRY G. LANGWORTHY, Dubuque
DR. WALTER L. BIERRING, Des Moines

Medical History of Franklin County

WILLIAM R. ARTHUR, M.D., Hampton, Iowa

(Continued from last month)

Dr. Alvin Harvey Chilson was born on March 17, 1885, in Boone, Nebraska. He was graduated in 1913 from the State University of Iowa College of Medicine in Iowa City. He was assistant to Dr. A. J. Hobson from 1913 to 1916, when he moved to Grafton, Iowa. He is now in practice in Mason City, Iowa.

Dr. Edward D. Allen was born in Freeport, Illinois, on October 25, 1889. He was graduated in 1914 from Northwestern University Medical College. He is a member of the American College of Physicians and Surgeons. He came to Hampton in 1914 and was in partnership with Dr. A. J. Hobson until the latter's death on November 18, 1926. Since that time he has been alone in practice.

Dr. A. C. Rhine, a native of Iowa, was graduated in 1912 from the University of Illinois College of Medicine. He came to Hampton from Rowan, Iowa, in 1915 and took over the practice of Dr. C. F. Osborne when he became head of the Hampton Clinic, which was opened at that time. In 1919 he left Hampton and entered military service in World War I. He continued in the service and a number of year later was reported as dead in the Philippines.

Dr. H. E. Meyer was born on January 22, 1877, in Hampton, Iowa, and was graduated in 1896 from the Hampton High School. He was graduated in 1903 from Northwestern University Medical College in Chicago. He came to Hampton in 1915 from Belmond, Iowa. Here he entered the Hampton Clinic and specialized in genito-urinary diseases. Dr. Meyer resigned from the Hampton Clinic in 1923 and moved to Turlock, California, where he now resides. Dr. Meyer served about one year in World War I.

Dr. Howard H. Johnston was born in Spencer, Iowa, on January 23, 1893, and was graduated in 1917 from the Chicago College of Medicine and Surgery. In 1917 he entered military service and was overseas one year. From 1919 to 1921 he practiced medicine at Raton, New Mexico. In 1921 he came to Hampton and was associated with the Hampton Clinic until 1926. In 1926 he entered an independent practice here, specializing in obstetrics and surgery. Dr. Johnston was instrumental in promoting the establishment of Beeds Lake State Park, three miles northwest of Hampton. His hobby is hunting moose and deer in Canada and he always brings home the game. Besides his practice of medicine, he and a partner have a force of men erecting high tension lines for the Rural Electrification Administration in many states.

Dr. Bruce E. McDowell was born July 16, 1897, in Franklin County, Iowa. He was graduated in 1923 from the State University of Iowa College of Medicine. He came to Hampton in 1927 from Allison, Iowa, and was associated with the Hampton Clinic until 1929, when he moved to Merced, California, where he is still in practice.

Dr. Lawrence Westenberger practiced in Hampton from August, 1931, to February, 1932, as surgeon for the Hampton Clinic. He came here from Fort Dodge, Iowa.

Dr. Walter J. Aageson was born March 12, 1907, in Coulter, Iowa. He was graduated in 1930 from the State University of Iowa College of Medicine. After completing his interneship at Portland, Oregon, he came to Hampton in July, 1931. In 1933 he left Hampton and entered military service. He now holds the rank of Major and was last reported as being stationed at Lovell General Hospital in Fort Devens, Massachusetts.

Dr. Guy T. McCauliff was born October 26, 1874, in Aredale, Iowa. He was graduated in 1902 from Northwestern University Medical Col-

lege in Chicago. He began the practice of medicine in Webster City, Iowa, in 1904 and remained there until 1928, when he came to Hampton and was chief surgeon at the Hampton Clinic. In 1932 he returned to Webster City, where he is still in active practice.

Dr. Joseph M. Burger was born in Hayes, Wisconsin, on October 20, 1905. He was graduated in 1931 from Northwestern University Medical College. He was resident surgeon of Cook County Hospital in Chicago before coming to Hampton in 1933. Dr. Burger was associated with the Hampton Clinic as chief surgeon until December, 1941. Since leaving here the doctor has been taking a rest and traveling. He is now located at Port Washington, Wisconsin, and is in active practice.

with Dr. L. E. Haecker until the death of Dr. Haecker on April 18, 1936, since which time he has practiced independently. On April 27, 1942, he entered the service of the Army of the United States and is located at Camp Joseph T. Robinson at Little Rock, Arkansas.

Dr. William Lloyd Randall was born August 30, 1906, in Denison, Iowa, and was graduated in 1934 from the State University of Iowa College of Medicine. Dr. Randall came here from Iowa City in 1937 and became associated with the Hampton Clinic, where he practices internal medicine.

Dr. Emerson J. Steenrod was born on February 5, 1907, in Pittsburgh, Pennsylvania. He was graduated in 1933 from the University of Pittsburgh School of Medicine. He was at the Mayo



Sitting (for left to right): F. L. Siberts, Geneva; F. H. Rodemeyer, Sheffield; J. C. Powers, Hampton; J. F. Martin, Latimer; W. R. Arthur, Hampton.
Standing (from left to right): E. H. Barg, Hampton; L. E. Hedgecock, Hampton; H. H. Johnston, Hampton; S. G. Walton, Hampton; W. L. Randall, Hampton; I. A. Marble, Sheffield.

Dr. Lewis E. Hedgecock was born in Kalo, Iowa, on March 27, 1901. He taught in the Hampton High School from 1927 to 1931. In 1935 he was graduated from the State University of Iowa College of Medicine. He came to the Hampton Clinic in July, 1936, and was associated with the clinic doctors until March 16, 1937, since which time he has practiced independently in Hampton. In March, 1942, he entered the service of the United States Navy and at the time of the last report was stationed at San Diego, California.

Dr. Seth G. Walton was born in Franklin County, Iowa, on October 2, 1907, and was graduated in 1933 from the State University of Iowa College of Medicine. He practiced at Bedford, Iowa, for a short time, coming from Bedford to Hampton in March, 1936. He was associated

Clinic in Rochester, Minnesota, before June, 1938, when he came to Hampton. He was Chief Surgeon at the Hampton Clinic, taking the place of Dr. Burger who was absent until September, 1938, when he left for Miami, Florida. Dr. Steenrod is at present in the practice of his profession at Iowa Falls, Iowa.

Dr. Egmont H. Barg was born on November 1, 1911, in Cameron, West Virginia. He was graduated in 1935 from the State University of Iowa College of Medicine at Iowa City. He was instructor in surgery at the University until he came to Hampton in January, 1941. Dr. Barg at once became associated with the Hampton Clinic as chief surgeon.

Dr. Jessie B. Hudson was born on March 4, 1870, in Franklin County, Iowa. She was gradu-

ated in 1908 from the State University of Iowa College of Medicine. She practiced medicine in Sheffield, Iowa, before coming to Hampton in 1941 for the practice of medicine. She also runs an antique shop.

FIRST FRANKLIN COUNTY MEDICAL SOCIETY

On February 15, 1876, a meeting of the medical profession was held in Hampton for the purpose of forming the Franklin County Medical Society. The following officers were elected:

President—Dr. O. B. Harriman, Hampton.
Vice President—Dr. C. H. Tidd, Geneva.
Secretary—Dr. J. H. Hutchins, Hampton.
Treasurer—Dr. J. B. Galer, Hampton.

Others present were Drs. J. J. Leas and J. S. Hurd of Hampton.

For a number of years the Society held regular meetings, then interest began to wane and finally the organization went out of existence.

In January, 1907, the Franklin County Medical Society was reorganized. The officials elected at that time were as follows:

President—Dr. F. L. Siberts, Geneva.
Vice President—Dr. A. J. Hobson, Hampton.
Secretary-Treasurer—Dr. F. E. E. St. Clair, Hampton.
Censors—Dr. J. H. Hutchins, Hampton; Dr. J. C. Powers, Hampton, and Dr. W. D. Leach, Alexander.

Since the reorganization in 1907 the Franklin County Medical Society has been active. At present there are eleven doctors in the Society, with three of the members in military service. The officers at present are as follows:

President—W. R. Arthur, Hampton.
Vice President—Dr. J. C. Powers, Hampton.
Secretary-Treasurer—Dr. E. H. Barg, Hampton.
Delegate—Dr. S. G. Walton, Hampton.
Alternate Delegate—Dr. J. C. Powers, Hampton.
Censors—Dr. F. H. Rodemeyer, Sheffield; Dr. J. F. Martin, Latimer; and Dr. H. H. Johnston, Hampton.

(The end)

FIFTH ANNUAL CONGRESS ON INDUSTRIAL HEALTH

(Continued from page 17)

Medicine and Legislation, and on Recent Developments in Rehabilitation, presented jointly with the Council on Physical Therapy.

On the last day a round table on Nutrition of Industrial Workers will be held in company with the Council on Foods and Nutrition and interested personnel from the National Research Council and the United States Public Health Service.

The entire program for the Fifth Annual Congress on Industrial Health, which was designed to illustrate how industrial health services can be extended and improved, appears on page 1145 of the December 5 issue of the *Journal of the American Medical Association.*

EXAMINATIONS OF THE AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next written examination and review of case histories (Part I) for all candidates will be held in various cities of the United States and Canada on Saturday, February 13, 1943, at 2:00 p. m.

Arrangements will be made so far as possible for candidates in military service to take the Part I examination (written paper and submission of case records) at their places of duty, the written examination to be proctored by the Commanding Officer (medical) or some responsible person designated by him. Material for the written examination will be sent to the proctor several weeks in advance of the examination date. Candidates for the February 13, 1943, Part I examination, who are entering military service, or who are now in service and may be assigned to foreign duty, may submit their case records in advance of the above date by forwarding the records to the office of the Board Secretary. All other candidates should present their case records to the examiner at the time and place of taking the written examination.

The Office of the Surgeon-General (U. S. Army) has issued instructions that men in service, eligible for Board examination, be encouraged to apply and that they may request orders to detached duty for the purpose of taking these examinations whenever possible.

All candidates will be required to take both the Part I examination, and the Part II examination (oral-clinical and pathology examination). Candidates who successfully complete the Part I examination proceed automatically to the Part II examination to be held later in the year.

The Part II examination will be held at Pittsburgh, Pennsylvania, May 19 to 25, 1943. Notice of the exact time and place of the examinations will be sent all candidates well in advance of the examination date. Candidates in military or naval service are requested to keep the Secretary's Office informed of any change in address.

If a candidate in service finds it impossible to proceed with the examinations of the Board, deferment without time penalty will be granted under a waiver of our published regulations applying to civilian candidates.

Applications are now being received for the 1944 examinations of the Board.

For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ATHLETIC INJURIES: PREVENTION, DIAGNOSIS AND TREATMENT—By Augustus Thorndike, M.D., associate in surgery, Harvard Medical School. Second edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, $3.00.

DERMATOLOGIC THERAPY IN GENERAL PRACTICE—By Marion B. Sulzberger, M.D., assistant clinical professor of dermatology and syphilology, New York Postgraduate Medical School. The Year Book Publishers, Chicago, 1942. Price, $5.00.

ELECTROTHERAPY AND LIGHT THERAPY—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. Fourth edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, $8.00.

THE 1941 YEAR BOOK OF PHYSICAL THERAPY—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1941. Price, $3.00.

SYNOPSIS OF DISEASES OF THE HEART AND ARTERIES—By George R. Herrmann, M.D., professor of medicine, University of Texas. The C. V. Mosby Company, St. Louis, 1941. Price, $5.00.

THE 1941 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—Edited by Joseph B. DeLee, M.D., professor of obstetrics, University of Chicago Medical School; and J. P. Greenhill, M.D., professor of obstetrics and gynecology, Loyola University Medical School. The Year Book Publishers, Chicago, 1942. Price, $3.00.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY—By Jerome E. Andes, M.D., director of department of health, University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, $4.00.

SYNOPSIS OF ALLERGY—By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, $3.00.

A TEXTBOOK OF NEURO-ANATOMY—By Albert Kuntz, M.D., professor of micro-anatomy, St. Louis University School of Medicine. Third edition. Lea and Febiger, Philadelphia, 1942. Price, $6.00.

ENCEPHALITIS: A CLINICAL STUDY—By Josephine B. Neal, M.D., clinical professor of neurology, College of Physicians and Surgeons, Columbia University. Grune and Stratton, New York, 1942. Price, $6.75.

PEDIATRIC GYNECOLOGY—By Goodrich C. Schauffler, M.D., assistant clinical professor of obstetrics and gynecology, University of Oregon Medical School. The Year Book Publishers, Chicago, 1942. Price, $5.00.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES—By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, $4.50.

CARCINOMA AND OTHER MALIGNANT LESIONS OF THE STOMACH—By Waltman Walters, M.D., Howard K. Gray, M.D., and James T. Priestley, M.D., of The Mayo Clinic and Mayo Foundation. W. B. Saunders Company, Philadelphia, 1942. Price, $8.50.

OCCUPATIONAL DISEASES—By Rutherford T. Johnstone, M.D., director of the Department of Occupational Diseases, Golden State Hospital, Los Angeles. W. B. Saunders Company, Philadelphia, 1941. Price, $7.50.

VAGINAL HYSTERECTOMY—By James W. Kennedy, M.D., surgeon-in-chief to the Joseph Price Hospital, Philadelphia; and Archibald D. Campbell, M.D., assistant professor of obstetrics and gynecology, McGill University. F. A. Davis Company, Philadelphia, 1942. Price, $10.00.

BOOK REVIEWS

THE HAND
Its Disabilities and Diseases

By Condict W. Cutler, Jr., M.D., associate surgeon, Roosevelt Hospital, New York. W. B. Saunders Company, Philadelphia, 1942. Price, $7.50.

This book is exceptionally well planned and well written. The various subjects have been presented concisely and are accompanied by 274 excellent illustrations.

Virtually all of the conditions of the hand are described, together with practical treatment of each one. There is an excellent chapter on the anatomy of the hand, a knowledge of which is necessary if one is to treat adequately its disabilities and diseases. This is followed by a chapter on infections, which particularly emphasizes the influence of the anatomy of treatment. In addition to these two chapters there are divisions on contusions, abrasions, incisions and lacerations, puncture wounds, foreign bodies, compound fractures, dislocations, amputations, congenital deformities, and tumors. Each one of these chapters gives a clear, concise description of the condition and problems involved. The discussion of tendon and nerve suture is especially good; in fact, every phase of the hand diseases has been thoroughly covered.

The book adequately fulfills the requirements of a guide for anyone who has the task of dealing with the diagnosis and treatment of hand conditions.

L. M. O.

PHARMACOPOEIA OF THE UNITED STATES

Prepared by the committee of revision and published by the board of trustees of the United States Pharmacopoeial Convention, Inc. Twelfth Revision. Official from November 1, 1942. Mack Printing Company, Easton, Pennsylvania, 1942.

The new U. S. P. XII, like each of its predecessors, is a great improvement over the preceding volume. Being the proud owner of the first Pharmacopoeia in 1820 and having reviewed each one published since that time, and having received my medical education from the U. S. P. 1890 and later, I feel qualified to express an opinion regarding this standardized work.

Many items have been deleted which have been proved unworthy, while many more new items have been added because of our improvement in chemotherapy and research study in hormones and vitamins. It is a wise move on the part of the U. S. P. Committee to suggest a partial revision every five years in order to keep the preparations more up-to-date because of our research, especially in chemotherapy. The tests for identification and purity are being steadily improved. Many more reagents for laboratory testing are listed and are well standardized. If, in his prescribing, every physician would follow more closely the preparations listed in the U. S. P., I feel sure the results would be better and

the druggist could limit his stock to fewer preparations. I heartily recommend the U. S. P. XII to any physician who is interested in the higher standards and better quality of medicinal agents used in his practice. R. L. P.

ABDOMINAL SURGERY OF INFANCY AND CHILDHOOD

By William E. Ladd, M.D., professor of child surgery; and Robert E. Gross, M.D., associate in surgery, Harvard Medical School. W. B. Saunders Company, Philadelphia, 1941. Price, $10.00.

This is a concise, well-illustrated textbook on abdominal surgery in infancy and childhood. The material presented is gathered from the surgical department of the Harvard Medical School and associated hospitals. Each subject is considered from the standpoint of etiology, pathology, clinical picture, roentgenologic examination, and medical and surgical treatment. The illustrations, both diagrammatic and photographic, are a valuable aid in the understanding of each subject. A bibliography is appended to each chapter.

This volume will be a valuable asset to all physicians who include children in their practice.

C. F.

FOOD CHARTS

Foods as Sources of the Dietary Essentials

Prepared by a joint Committee of the Council on Foods and Nutrition of the American Medical Association and of the Food and Nutrition Board of the National Research Council. Paper. American Medical Association, Chicago, 1942. Price, 10 cents; quantity prices on request.

Current interest in nutrition is at a high level and the subject merits all the attention which it is receiving. A forceful presentation of some facts about foods as sources of the dietary essentials is provided by this illustrated essay. There are eight charts showing the contribution that individual foods may make with respect to the needs for protein, calcium, iron, vitamin A, thiamine, riboflavin, nicotinic acid, and ascorbic acid. A feature of these graphic presentations is that the values are presented in terms of the proportion of the daily requirements which are supplied by typical servings of each food. The charts show, for example, that a serving of about three and one-half ounces of cooked greens (beet, kale, chard, mustard, spinach, turnip) will supply more than 10,000 International units of provitamin A, the daily allowance of which is 5,000 International units. An orange of average size, or half a grapefruit, or a serving of fresh strawberries will supply the 75 milligrams of ascorbic acid, which is considered to be a desirable intake of vitamin C. It is interesting to note the unique value of milk as a source of calcium, protein, and riboflavin. There is a descriptive paragraph or two about each of the charts. In addition the booklet reproduces the table of recommended dietary allowances and also provides the values of minimum dietary requirements developed by the Food and Drug Administration for purposes of labeling special dietary foods. This little essay thus provides considerable factual information about foods as sources of the dietary essentials.

THEY DO MEET

Cross Trails of American Physicians and Chinese People

By Bertha L. Selmon, M.D. Froben Press, New York, 1942. Price, $2.50.

Although this book is dedicated to the youth of China and America, adults will find it very enjoyable reading. It relates the experiences of a husband and wife who went to China as missionaries and tells of their efforts to gain a medical education. It is always interesting to hear the story of those who work their way through college. She started with thirty dollars and he worked on a farm in the summers. She studied nursing to finance her way and became ill with tuberculosis, which seems to be the fate of many ambitious students. Most of the book is devoted to the customs of the people of China, which are shown by well written descriptions of their life among them. Apt Chinese proverbs are quoted.

The Sheldons adopted two Chinese children and brought them back to the United States when they had to remain here. Dr. Arthur's diary is used to describe his experience with bandits. They found travel in a padded wheelbarrow more comfortable than a donkey cart. History, philosophy and medical care are woven into a story which is educational and restful for home reading. N. S. N.

ALLOCATION OF PHYSICIANS

Dr. Frank H. Lahey, Chairman of the Directing Board of the Procurement and Assignment Service, has asked the Journal to publish the following notice:

"It is of the utmost importance that the Procurement and Assignment Service for Physicians, Dentists and Veterinarians, immediately has the name of any doctor who is really willing to be dislocated for service, either in industry or in overpopulated areas, and who has not been declared essential to his present locality. This is necessary if the medical profession is to be able to meet these needs adequately and promptly. We urgently request that any physician over forty-five years of age who wishes to participate in the war effort send his name to the State Chairman for the Procurement and Assignment Service in his state."

The JOURNAL
of the
Iowa State Medical Society

VOL. XXXIII DES MOINES, IOWA, FEBRUARY, 1943 NO. 2

SPUTUM STUDIES AS A PRACTICAL AID IN PNEUMOCOCCIC PNEUMONIA*

ARTHUR W. FRISCH, M.D.
Detroit, Michigan

As soon as the physician makes the diagnosis of pneumonia he is confronted with several important problems. Is the infection due to a pneumococcus? If so, what is the type? How sick is the patient? What are his chances of recovery? What form of treatment would be most advantageous? The answers to these questions are usually obtained from laboratory studies and their value depends upon the ability and integrity of the laboratory personnel. We have learned that 90 per cent of the cases of pneumonia are due to infection by a species of micro-organism which is called a pneumococcus. The capsule surrounding the pneumococcus is composed of a carbohydrate of such individuality that it enables us to separate the species into fifty different types. We have also learned that the most accurate indices of the severity of the disease are the blood culture and the total white blood cell count. These laboratory tests are of importance in each case because the mortality rate is directly related to the type of pneumococcus, the incidence of blood stream invasion, and the ability of the body to produce the white blood cells which finally phagocytize and destroy the bacteria.

The laboratory could be of even greater service to the physician, however, if some method of visualizing the pneumonic process in the lung could be developed. For the past five years we have been utilizing rusty sputum as a means of obtaining serial biopsies of lung exudate from individual patients. The technic of examining sputum is relatively simple and the information which can be obtained by this method appears to be of sufficient value to warrant general application. Thin smears are made directly from representative rusty portions of sputum. The wet slides are flooded with Wright's blood stain for three to seven minutes. Without the addition of buffer, the stain is washed off with tap water and the slides are air dried. The capsules of the pneumococci usually do not stain but are readily visualized as clear or occasionally as pink zones around the dark blue diplococci. The mucin stains pale pink; the leukocytes and the red blood cells are differentiated as on a blood smear.

During the study it was found that rusty sputum, relatively free of organisms other than pneumococci, gave the most consistent results. Frankly purulent specimens contained large numbers of encapsulated pneumococci which had little relation to the clinical course or to the outcome of the pneumonia. The number of extracellular encapsulated pneumococci per oil immersion field was determined by counting ten widely separated fields on the slide. A microscopic field was considered suitable for counting if it contained ten to fifteen leukocytes or red blood cells, if organisms other than pneumococci were absent, and if the capsules of the pneumococci were distinctly visible. When good specimens of sputum were obtained, the pneumococcic counts increased or decreased progressively; sudden changes in the number per field were found to be due primarily to poor specimens rather than to errors in technic. If reliable results are to be obtained, good sputum samples are essential.

The number of extracellular encapsulated pneumococci per oil immersion field was found to be a good index of the severity of the pneumonia in individual patients. In 207 patients with sputum counts of 10 per field or less, the bacteremic incidence was 13 per cent and the fatality rate only 3 per cent. In 99 patients with sputum counts between 11 and 35 per field, the bacteremic incidence was 40 per cent and the fatality rate was 8 per cent. On the other hand, in 64 patients with sputum counts exceeding 35 per field, the bacteremic incidence was 70 per cent and the fatality rate was 63 per cent. At the present time we are giving both serum and chemotherapy to those patients

*Presented before the Sixteenth Annual Meeting of the Iowa Public Health Association, Des Moines, April 14, 1942.

whose sputum counts exceed 50 per oil immersion field. This group constitutes only 10 per cent of the total cases, but it is responsible for the majority of deaths from pneumonia.

The character of the gross sputum may also be utilized as an index of the severity of the pneumonia. Four main categories have been defined: mucoid, purulent, bloody and rusty. The mucoid and purulent specimens have received little attention and therefore will not be discussed. Those patients with rusty and bloody sputa, however, have been divided into two classes. Those who produce small amounts of sputum after strenuous coughing have been called "dry lungs", whereas those who produce large quantities of sputum, with relative ease, have been called "wet lungs." Compilation of data from 653 cases of pneumonia has revealed that 58 per cent may be classified as dry and 42 per cent as wet. In 382 cases with dry lungs the incidence of bacteremia was 15 per cent and the fatality rate was 6 per cent. These results are to be contrasted with 271 wet lung cases in which the bacteremic incidence was 59 per cent and the fatality rate was 24 per cent. In other words, those patients who produced large amounts of rusty or bloody sputum were the most critically ill. However, the character of the gross sputum was not as reliable a prognostic aid as the number of pneumococci per oil immersion field in stained specimens.

The foregoing data do not include cases of infection due to type III pneumococci, because the number per oil immersion field in smears of rusty sputum was not reliable as an index of the severity of the illness. With the technic used the capsules of these organisms stained red in contrast to other types of pneumococci. It was possible to separate the patients into mild and severe cases depending upon the character of the visualized background in the Wright stained specimens of sputum. In one group of patients called "non-reticulated" a pink granular background was present on the slides. In a second group called "reticulated" the background was composed of a coarse, branching, bluish-red, fibrin-like reticulum which seemed to originate from the capsules of the interdispersed pneumococci. The usual quellung reaction as seen in non-reticulated sputa consisted of the blue diplococci surrounded by an individual, swollen, greenish-gray capsule. On the other hand, an unusual quellung reaction was observed in reticulated sputa in which the capsule of one organism was connected to that of another by means of long strands of capsular carbohydrate. In addition, masses of free swollen capsular carbohydrate were seen that appeared as greenish-gray material in which no pneumococci were visible. This interconnecting meshwork of specific soluble substance varied from large amounts in heavily reticulated sputa to small strands joining two or more pneumococci in some non-reticulated specimens. Analysis of numerous sputa revealed that types I, II, VII, VIII, and non-reticulated III specimens contained from 10 to 100 milligrams per cent of capsular carbohydrate, whereas the capsular carbohydrate content of reticulated type III sputa varied from 100 to 2,500 milligrams per cent. The individuality of type III pneumonia is further emphasized by the fact that in 66 cases in which the sputum was classified as non-reticulated, the bacteremic incidence was 2 per cent and the fatality rate was 4 per cent. The 45 patients whose sputa were classified as reticulated showed a bacteremic incidence of 58 per cent and a fatality rate of 83 per cent.

Examination of sputum has also revealed the difference in the mode of action of serum and chemotherapy as seen in human patients. Within eight to thirty-six hours after intravenous injection of specific horse or rabbit serum, the pneumococci in the sputum were found to be agglutinated and in many cases an increased phagocytosis of the organisms was demonstrable. The number of pneumococci per field, however, decreased gradually in most instances so that by the time the sputum lost its rusty character, only a few were present. Occasionally, specimens of sputum from patients who had not yet received therapy contained pneumococci which were already agglutinated. In these instances it was believed that the spontaneous clumping was indicative of a developing active immunity on the part of the patient himself. It was also observed that when serum was given to patients with large numbers of pneumococci in the sputum, the induction of agglutination was difficult and in some cases a progressive increase in the number of pneumococci occurred even in the presence of clumping and phagocytosis. Chemotherapy, on the other hand, usually accomplished that which serum often failed to do. Within twelve to thirty-six hours after the administration of sulfanilamide, sulfapyridine, sulfathiazole or sulfadiazine, the number of pneumococci per field in the sputum decreased rapidly. This effect was independent of the agglutination and phagocytosis associated with active or passive immunity. Occasional patients were encountered who failed to show a decrease in the number of pneumococci, but the majority of those treated with the four drugs responded with a typical bacteriostatic effect in the sputum.

"Drug fastness," as judged by the return of the pneumococci to the sputum following an initial decrease, was observed in 17 per cent of the patients treated with sulfanilamide, whereas the

same phenomenon occurred in 6 per cent of those given sulfapyridine and in only 2 per cent of those treated with sulfathiazole.

The data presented indicate that examination of rusty sputum yields practical information concerning individual cases of pneumonia. The potentially severe and mild cases may be selected on the basis of the character of the gross sputum, the number of pneumococci per oil immersion field in stained specimens, and the amount of capsular carbohydrate produced by the pneumococci. The effects of therapy may be observed in each patient throughout the acute stages of his illness. The method of study is sufficiently simple to warrant general application as an additional tool for the control and treatment of pneumococcic pneumonia.

ACUTE DISSEMINATING LUPUS ERYTHEMATOSUS

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This case is being reported somewhat in detail because it concerns a condition which is apparently increasing in frequency and which is seldom discussed in general medical literature.

CASE REPORT

Present Illness: A housewife, 22 years of age, first consulted one of us on July 19, 1939, for prenatal care. Her general physical examination was negative and the pregnancy terminated normally on August 12, 1939. The postpartum course and follow-up examination were normal. Her general health was excellent at that time. Several months later she was examined for indefinite complaints which were considered to be functional due to an unhappy home life.

On December 2, 1940, she was seen again and examined for the complaint of pain and stiffness in the wrists, arms, shoulders and knees. These symptoms gradually increased in severity. Her temperature was normal. The joints of the fingers showed arthritic changes and there were lesions of the fingertips which resembled petechiae. During the following three weeks she had numerous spontaneous hemorrhages from the nose and complained of her joints being stiff, swollen and painful.

She was admitted to the hospital for diagnosis and treatment on January 8, 1941.

Past Medical History: Irrelevant.

Physical Examination: The patient was fairly well nourished but pale. The retinae were negative and there were no external eye lesions. The nose and throat were negative for foci of infection. The hard palate was excoriated by what appeared to be dry, shallow, ulcerated areas. All of the lymph glands were moderately enlarged and tender; the most prominent ones were in the left posterior cervical region. The heart and lungs were negative. The spleen was definitely palpable and tender on inspiration. Rectal and vaginal examinations were negative. The finger joints of both hands were swollen and tender. There were large petechiae on several of the fingertips, but none under the nails. The rectal temperature was 100.6 degrees, the pulse was 86 per minute, and the blood pressure was 130/80.

Laboratory Examination: The hemoglobin (Dare) was 80 per cent and the red blood cell count was 3,260,000. The white blood cell count was 6,000 with a differential count of polymorphonuclears 80 per cent and small lymphocytes 20 per cent. The sedimentation rate (Cutler) was 27 millimeters in an hour. The urine contained a trace of albumin. Kolmer, Kline and agglutination tests for typhoid and undulant fever were negative. A biopsy of a cervical gland was taken because of a tentative diagnosis of malignant lymphoma. The microscopic examination showed considerable hyperplasia, normal architecture and no evidence of any malignant change.

Subsequent Course: The patient was placed on a high vitamin diet with supplementary vitamins, ferrous sulfate and salicylates. The white blood count dropped to as low as 3,900 without any change in the differential count. The rectal temperature varied from 99 to 100.4 degrees. After nine days she returned home somewhat improved. Her course continued about the same, however, and she was sent to the University Hospital in Iowa City where the diagnosis of rheumatoid arthritis was made and then returned to her home.

On March 15 she began having frequent chills and a temperature as high as 103 degrees. A troublesome hacking cough also appeared at this time. She was readmitted to the hospital on March 30, 1941.

Physical Examination: The patient appeared very ill. There was an indurated, erythematous patch over both cheeks and the bridge of the nose suggesting lupus erythematosus. There were numerous scaly, acneform lesions over the face and forehead. The excoriations in the mouth previously noted were present and had spread to the buccal surfaces. The joints and glands were not tender and the swelling had subsided. The spleen was not palpable and the heart and lungs were clear. The blood pressure was 130/90.

Laboratory Examination: The hemoglobin (Dare) was 60 per cent and the red blood cell

count was 2,820,000. The white blood cell count was 5,150 with a differential count of polymorphonuclears 80 per cent, mononuclears 2 per cent, and large lymphocytes 18 per cent. The blood urea was 80 milligrams and the blood sugar 135 milligrams. The urine was straw-colored, acid, the specific gravity was 1.010, albumin 1 plus, and microscopic examination revealed many white blood cells, a few red blood cells, and many granular casts.

During the remainder of her illness there was no change in the laboratory findings regardless of her clinical status.

Subsequent Course: The rectal temperature of the patient ranged from 101 to 103 degrees, the pulse was 100 to 120 and the respirations were from 20 to 28 per minute. Sulfathiazole therapy was instituted soon after admission and during the next seventy-two hours a total of 12 grams was administered and retained. Nausea and vomiting became so marked that the drug was discontinued, and after an interval of twenty-four hours sulfanilamide was given. There was no improvement in her condition after a total of 16 grams had been administered and this drug was also discontinued. On April 3 a transfusion of 500 cubic centimeters of citrated blood was given.

On the evening of April 5 the patient complained of a sudden severe pain in the left anterior axillary region. This was accompanied by severe dyspnea, orthopnea and cyanosis. Shortly after this a friction rub was heard in the area of the pain which was thought at first to be cardiac but was proved to be pleural. Several hours later there was an area of suppression of breath sounds and signs of consolidation in the left lower axilla. Following this her condition became progressively worse. The face lesion, which was prominent on admission, had subsided after the sulfanilamide therapy.

At no time were we able to find evidence of cardiac disease. On April 17, her general condition seemed to be somewhat improved. That evening generalized convulsions developed which persisted intermittently until her death the following morning.

Clinical Diagnosis: Acute disseminating lupus erythematosus.

AUTOPSY ABSTRACT

The body presented evidence of emaciation from a chronic illness. The skin was mottled and non-elastic. Violaceous areas were present over the face and lesions resembling acne were numerous on the face and chest. None of these were pustular. There was a minimum of subcutaneous fat.

The pleural cavities were first explored. The right was normal. There were some delicate fibrous and fibrinous adhesions anteriorly and on the diaphragmatic surface of the left lung. These were easily broken down. The pericardium was opened and contained about 200 cubic centimeters of straw-colored fluid. The surface of the heart was normal. The heart was opened in the usual way and there were no lesions. The lungs were removed and examined. There were no significant lesions except a terminal bronchial pneumonia, which was extensive, especially on the left. The abdominal viscera were in their usual positions. The only lesions uncovered in the abdominal viscera were in the spleen, which was moderately enlarged and rather firm. In the splenic substance were three small areas of necrosis, one of which seemed to be centrally liquified. All were centrally located and not more than five millimeters in diameter. In the hilus of the spleen were three firm hemorrhagic lymph nodes. Other abdominal lymph nodes which were moderately enlarged were those about the biliary tract and the periaortic lymph nodes in the lower abdomen. The kidneys were not grossly remarkable. The remainder of the urinary and the genital tracts were normal.

Microscopic Report: A section of the esophagus showed a chronic ulceration with erosion through the submucosa to the muscularis. Little healing effort was apparent. The ulcer base contained a thin necrotic membrane. No vascular lesions were found, although there were a few foci of round cell infiltration in the adventitia of one or two small arteries outside the muscularis.

In the liver there was a little fatty metamorphosis in the central part of the lobules and also slight, cloudy swelling. There were foci of rather heavy round cell infiltration in the periportal connective tissue. This was periductal and not perivascular.

The histology of the kidneys revealed a few areas of interstitial hemorrhage, a few avascular glomeruli, and a few showing areas of necrosis. Vascular thickening at the base of one of the tufts, an occasional adhesion between tufts and capsule, and one poorly formed crescent were noted. There were no other vascular lesions and no acute inflammatory lesions.

In the lungs there was an acute patchy pneumonia with an intervening area of edema as evidenced by acellular precipitate in the alveoli. The pleura was thickened in some places; there were areas of round cell infiltrations and foci of subacute inflammation with some polymorphonuclear cells and lymphocytes.

All the lymph nodes showed hyperplasia with some polymorphonuclear leukocytes in the peripheral sinuses. Sections of the nodes from near

the spleen revealed a partial hemorrhagic destruction of the architecture. Sections of the spleen showed only moderate evidence of sepsis as evidenced by many polymophonuclears in the sinuses. The small areas of necrosis seen grossly were not visible in the sections.

Anatomic Diagnosis: Terminal bronchial pneumonia; subacute, and minimal, glomerular and interstitial nephritis; and evidence of chronic sepsis.

COMMENT

As yet there is considerable confusion as to whether or not this is a definite disease entity and if so whether it is an infection or a toxemia.[1 and 5] There is some pathologic evidence which suggests this is a diffuse vascular disease.[2 and 3] Some of the cases have an atypical endocarditis and have been classified as Libman-Sachs disease.[4]

The clinical diagnosis is dependent entirely upon the appearance of the characteristic skin manifestation of lupus erythematosus. This finding may be screened by the general symptomatology to such a degree that it is not considered a significant part of the diagnostic picture or its appearance may be delayed until the terminal stage.

A patient suffering from acute disseminating lupus erythematosus may have a few or all of the following symptoms and findings: A fever of varying degree, arthralgia or arthritis, pleomorphic lesions of the skin and mucous membranes which usually start as an erythematous patch, anemia, leukopenia, nephritis, and endocarditis. The course may be remittant or fulminating and is usually fatal within a few months.

A histologic study of the skin lesions usually will help in making a correct diagnosis according to Montgomery[5] who states that the pathologic changes in the skin are characteristic, whereas those in the rest of the body are suggestive of a generalized toxic process.

The treatment has not been successful up to this time. Wile and his associate and others[6, 7 and 8] report on the use of the sulfonamide group of drugs and the response was not considered satisfactory. In the case cited there was not the slightest response suggesting a favorable action of either sulfanilamide or sulfathiazole.

SUMMARY

Acute disseminating lupus erythematosus is a disease which has such variable and bizarre clinical manifestations that it must be kept in mind as a possible diagnosis in all acute febrile illnesses. This is particularly true where there are persistent skin lesions of any variety which at some time during their course have the lesion of lupus erythematosus.

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ACUTE ABDOMINAL EMERGENCIES*

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This discussion is not meant as a review of the acute abdominal diseases; it is rather a consideration of the acute abdominal emergency operation. I wish to give the observations and conclusions of a study of my personal series covering twenty years.

In order to successfully diagnose and treat a patient with an acute abdominal disease it is necessary to know a great deal about the abdomen. I prefer to visualize the anatomy of the abdomen from the aspect of its embryologic origin. Essentially, the abdominal cavity began as a closed sack. It has been twisted and changed in its embryologic growth so that it forms in the adult two cavities, a greater and a lesser peritoneal cavity. The foramen of Winslow is the communication or bottleneck between them. The lesser sack became modified to form the omentum, a fatty protective apron hanging down anterior to the viscera. The greater sack contains the abdominal viscera which have grown and pushed forward, invaginating the peritoneum. The smooth peritoneal layer has been carried along, entirely covering these organs except for their roots or attachments. Normally, they fill the entire space.

The abdominal organs may be classified into several definite groups or tracts. Since the abdomen is primarily the seat of digestion and absorption, we will consider the gastro-intestinal tract first. This is made up of the stomach, duodenum, jejunum, ileum, cecum, appendix, and the various parts of the colon.

*Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.

The biliary tract consists of the liver, hepatic ducts, cystic duct, gallbladder, common bile duct and the ampulla of Vater where it enters the duodenum. The pancreas and the pancreatic duct enter the duodenum with the bile duct. These organs all play a part in the digestive function and have a close relation in their disease symptomatology. This often makes a confusing picture in the emergency operative case.

The spleen is really an independent organ in the abdomen. It is a part of the hemopoietic system and is seldom the offender on the emergency operating table. Low down in the female abdomen are the reproductive organs; the uterus, fallopian tubes, ovaries, and their supporting ligaments.

These organs are all complex structures which may be likened to factories, while their roots and attachments carry the lines of communication. They are the blood vessels which carry in oxygen and other elements and carry out the products of digestion and assimilation. Through these attachments, also, come the nerves, a complex mechanism of control. The unique portal circulation drains the sugar laden blood to the liver, and the abdominal lymphatic vessels carry the emulsified fats into the blood stream.

I shall not dwell upon the structure of these organs or their function, but shall leave that to your memory of histology and physiology. These things are important, however, since pathologic changes and disturbed physiology play an essential part in the diagnosis and treatment of surgical emergencies. Also of significance are the structure and function of the peritoneum, its properties and its behavior under insult — infectious, chemical or traumatic.

The relation of organs to each other and their variations of position, both normal and abnormal, should be known. Directions of drainage, as determined by structural position and by gravity, are also interesting and helpful factors.

I wish to discuss briefly the structures surrounding the abdominal cavity. The anterior abdominal wall is the flexible portion made up largely of skin, fascia, muscle and varying amounts of fat with its adequate quota of blood vessels and nerves. Its structure presents no great complexity, yet it is really the diagnostic sounding board of the abdomen, as well as the means of surgical approach. A surgeon who thoroughly knows the anterior abdominal wall, and all which can be elicited there, knows a lot of surgery. It is here that the areas of pain can be localized, as well as the points of skin hypersensitivity which are often of value in determining appendicitis. The areas of tenderness and rigidity may give some idea of the pathology beneath. It is here the protruding liver edge can be felt and also the tender and even palpable gallbladder. The more or less localized pelvic rigidity and tenderness may likewise be observed. The board-like rigidity of the ruptured ulcer may be noted high in the abdomen during the first stage, and it moves down gradually along the mesenteric root, later appearing in the right iliac fossa.

The surgeon must see and feel many things when he observes the abdomen of a patient suffering from an acute abdominal disease. Is it distended or flat, rigid or flaccid? Is it the pendulous abdominal wall of an obese person or the muscular wall of the athlete?

A diagnosis cannot be made from the outer abdominal wall alone. A hasty but careful history and a general physical examination should always be made. Laboratory examinations of the blood and urine and x-ray determinations are of the greatest importance. A rectal examination should be made in all cases and also any other specific test which might help. Lung and heart examinations should be as thorough as time permits. It is also important to make a careful examination of the anterior abdominal wall to obtain even a tentative diagnosis. Here the surgeon must go even further than the diagnosis. The anterior abdominal wall is his point of approach, and just where and how he makes his incision is the first important step. He must often visualize not only one pathologic condition but several possibilities. He may be required to make an incision through possibly four or five inches of fat—and who knows how many scars and adhesions—with perhaps a poorly relaxed abdominal wall, while a perspiring anesthetist struggles with a short, obese, thick-necked patient, gurgling and cyanotic during the entire operation. That is the abdominal emergency as we have often seen it in the past and still see it today, but fortunately less often. Modern and better methods have eliminated at least the greater part of these difficulties.

The posterior abdominal wall is the wall of support and protection. It is important largely because of certain extraperitoneal organs situated there, such as the kidneys and adrenal glands. The large trunk blood vessels, the aorta and vena cavae, and the vessels emerging from the roots of the organs all converge here. There is a dense network of sympathetic nerves and plexuses, and it is a good area for the surgeon to avoid.

Above is the diaphragm, and it is the only structure between the abdomen and the pleural cavities

where so many confusing pathologic conditions exist. Below the abdominal cavity is the pelvic floor, the bladder, and in the male, the prostate and seminal vesicles—just so many more structures to confuse a diagnosis. The bony pelvis, the spine and the lower ribs may at times enter the diagnostic picture, but not often.

In treating acute abdominal emergencies during the past twenty years, several facts stand out in my mind: First, there is a definite limitation of time in every emergency case. You must conclude now, and generally you must act. If not, you will too often pay the price. At times, as in hemorrhage, you have only minutes to make up your mind. Often you have a few hours to make your conclusions, condition the patient, combat shock, replace fluids and blood, and even give some rest. But much delay in any emergency is dangerous. It will not do to give a sedative and wait until tomorrow. Act immediately. Everything about an emergency case calls for prompt action. This is especially true in cases of shock or hemorrhage or even overwhelming infections, such as in fulminant appendicitis. There is often the urgent need of early and prompt surgery, but there may be even a more pressing need for supportive measures. The status of the patient as a surgical risk may need improvement. Replace lost fluids by saline and glucose; combat shock and blood loss by serum and blood transfusion; relieve troublesome vomiting and distention by nasal catheter and lavage and by duodenal and intestinal decompression. Enemas may be indicated. It is often advisable to wait a few hours until shock has subsided or a failing circulation has revived. Local heat and even stimulants may help. We must constantly remind ourselves that the risk, as far as the intra-abdominal condition causing the emergency is concerned, often is directly in proportion to the time elapsed since the origin of that emergency.

Second, abdominal emergencies do not come heralded. There is no simple or easy way to determine the emergency case. All the physician sees is another patient who has symptoms referable to the abdomen—simply another acutely ill individual who has more or less suddenly contracted acute abdominal symptoms. Usually pain is the one predominant symptom. At times vomiting, nausea, distention, failure of the bowels to move, or even shock may be the first thing noticed; but generally it is pain, the most elusive of all symptoms, and yet probably the most valuable. With this as a beginning, the physician must develop his case. Some dangerous condition is or is not present, but the emergency does not take form until the physician recognizes its need. In that sense he must create the emergency. How, then, should he proceed?

It is impossible for me to discuss all the means of diagnosis, but I should like to give this brief outline of symptoms: First, abdominal symptoms are either true or faked. I remember in my early practice a patient with violent abdominal symptoms of pain and distress. It appeared to be an emergency case and I was practically ready to send her to the hospital. Fortunately, a suspicion of fake was verified when the male party present was sent for a glass of water and the patient confessed that she was not ill at all but simply getting even for some neglect.

In the second place, symptoms are either physical or mental. We are all familiar with the scarred abdomen, the seat of many surgical battles. A profound neurotic person may have several emergencies and yet no actual abdominal pathology. In the surgical hypochondriac, the pain is mental.

Third, symptoms may be pathologic or physiologic. Who has not been called out at night to find an anxious young mother pacing the floor with a crying baby whose knees are drawn up with violent colic? This is surely an emergency to the mother but to the physician who was urgently summoned it becomes a hunger colic, a baby with an upset digestion, and the pangs of hunger pain. It is true that this physiologic condition becomes pathologic if neglected, but it is not a surgical emergency.

Fourth, the symptoms may be from either intra-abdominal or extra-abdominal conditions. A patient in a tabetic crisis has agonizing abdominal pain and violent symptoms but no abdominal lesion. The seat of the trouble is in the spinal cord. Many general medical diseases, such as tuberculosis and malaria, have in some instances marked abdominal symptoms which may simulate an abdominal emergency. It is impossible to mention all the extra-abdominal conditions which may simulate an acute abdominal emergency, but special attention should be given to the genito-urinary tract and the respiratory organs.

Finally, if we are convinced that abdominal pathology does exist and some surgical measures are necessary, we might ask ourselves what pathologic conditions we might expect when we open the abdomen. I shall present a short outline of pathologic conditions which account for practically all abdominal emergencies:

First and foremost are abdominal infections, such as appendicitis, cholecystitis, salpingitis, pancreatitis, and primary peritonitis.

Second are the obstructions. Intestinal obstruction may be due to intussusception, volvulus from adhesions or bands, hernias, carcinoma (especially of the colon) and extrinsic tumors or even fecal concretions. Biliary obstructions may be encountered in gallstones, constrictions, bands or malignancies. However, they are less often emergencies.

Third are perforations. They may be classified as duodenal, gastric, intestinal, appendical, tubal, and ovarian.

Fourth are the strangulations, either of a loop of intestine or of some other structure such as the omentum or other viscera. Strangulated hernias also belong to this group.

Finally, there are the hemorrhages. They may occur in almost any part of the gastro-intestinal tract. In the female they are especially prevalent in the reproductive organs, such as in an ectopic or tubal pregnancy, and in a ruptured graafian follicle and corpus luteum of the ovary. Occasionally, a ruptured cyst will cause a hemorrhage; and trauma may cause bleeding anywhere in the abdomen.

It is with these conditions, or some combination of them, that the physician must deal in most emergencies. In studying any series, we find that acute infections account for the bulk of emergency cases. It is estimated that practically 50 per cent of all abdominal emergencies are caused by appendicitis, but in my own series the percentage is much higher. I believe this is true of most physicians in rural communities as compared with those in large clinics.

Cholecystitis in my series accounted for only a limited number of emergencies. Most of these were patients with ruptured gallbladders, or those threatening rupture, or patients for whom it seemed impossible to make a conclusive diagnosis. At times we may suspect a high lying appendix or a ruptured ulcer but find acute cholecystitis. These questionable cases should always be subjected to prompt surgery. My emergency cholecystectomies have increased in the past two years with the trend. Only time and careful study will prove the wisdom of this early surgery of acute conditions in the gallbladder.

Salpingitis should rarely constitute an emergency today. With present chemotherapy, the large pelvic abscess requiring drainage is seldom seen. However, any general surgeon occasionally may operate on a patient in whom the diagnosis between a right salpingitis and appendicitis is sufficiently clouded to warrant emergency surgery. I have seen a pelvic appendix neglected because the physician thought he was dealing with a tubal case.

Pancreatitis and primary peritonitis are generally diagnosed on the operating table. As primary emergencies, they scarcely exist in my series. If diagnosed before operation, probably both conditions would be treated conservatively.

The obstructions are an interesting group. They tax the diagnostic acumen to the limit but, fortunately, they often give a little more time for study. The early vomiting in high obstruction and the rather delayed vomiting with low obstruction are characteristic. It is usually the neglected case which comes to the emergency operating table.

In dealing with perforations, an outstanding symptom is shock, which is at times accompanied by hemorrhage. In due time there may be infection. It is a sudden abdominal catastrophe with sharp pain and shock. It is not the most common emergency but a very striking one. Woe to him who fails to recognize its presence!

Various forms of strangulation comprise a large portion of the emergencies. Again, I should like to stress the necessity for prompt action. The urgency will depend on the extent to which the blood supply is cut off. Any delay over the six hour period, whether for a strangulated hernia, volvulus, or twisted ovarian pedicle, is decidedly dangerous.

Hemorrhage frequently causes an emergency when it is within a hollow viscus, as a bleeding ulcer, or it may be into the peritoneal cavity, such as in a ruptured ectopic pregnancy. In either case an emergency exists. It may not be necessary to perform a laparotomy, but rest with adequate replacement of blood and fluids may become necessary at any time and the patient must be held in readiness for abdominal section if needed. The safest method is to treat an ectopic pregnancy surgically when diagnosed, if conditions permit.

In all emergencies the final test is in the operating room. Here the primary need is to save a life. Long and complicated operative procedures and detailed, fancy technic have no place in the emergency case. The wise surgeon will do what is necessary to save life and possibly leave much undone for a later operation. Avoid trauma and rough handling since this adds shock. Blood loss may weaken an already ill patient. Do not spread infection in the abdomen by breaking nature's walls or by unnecessary exploration. Choose the simplest, shortest and least shocking operation which will answer the purpose. It is often human to want to finish the job, but one should remember that in so doing he may finish the patient. It is best to have a living patient and a clear conscience.

PULSATING EXOPHTHALMOS

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Pulsating exophthalmos is a distinct pathologic entity and should in no sense be considered as related to the exophthalmos of hyperthyroidism. Although both conditions bespeak a definite pathology, pulsating exophthalmos is the result of an intracranial disturbance whereas the exophthalmos of hyperthyroidism is expressive of an altered function of the thyroid gland. A protruding eyeball is characteristic of both conditions. In no other sense are they related.

de Schweinitz defines pulsating exophthalmos as "characterized by protrusion and pulsation of the eyeball (the vascular protrusion of Nunnely) and a distinct bruit heard over the eye, forehead and cranium." Dandy, in his latest contribution on this subject, prefers to speak of pulsating exophthalmos as a "carotid-cavernous arteriovenous aneurysm." It would seem that this nomenclature could not be improved. Dandy further classifies pulsating exophthalmos as belonging to that great group of "cranial injuries and their effects," preferring to speak of this form of exophthalmos as a late effect of a cranial injury. As we go further into the etiology and pathology of pulsating exophthalmos, the reason for this classification by Dandy will be more apparent.

Pulsating exophthalmos is comparatively rare. One of the ophthalmologists of Iowa recently said he had seen only five cases in thirty years. The first case reported in the literature was by Travers in 1805. By 1907 three hundred and thirteen cases had been recorded. The first important analysis of the literature was made by Sattler in 1880. His report embraced one hundred and six cases. Since 1880, a number of important papers and monographs have been published. The monograph by de Schweinitz and Holloway is one of the best available and is also one of the latest in the literature.

Considerable confusion existed in the minds of the earlier writers as to what actually caused pulsating exophthalmos. Some form of aneurysm of the ophthalmic artery generally was believed by these earlier writers to be the cause of the malady. Nelaton and Rivington, and Sattler and Slomann, and following these, Keller, all demonstrated that some communication of the internal carotid artery with the cavernous sinus was the real causative factor in pulsating exophthalmos. Keller contended "that the term pulsating exophthalmos should be strictly limited to that disease in which a communication of the internal carotid with the cavernous sinus has been demonstrated or is reasonably certain." Rivington and Keller were among the first to show that exophthalmos with pulsation and bruit can result from an aneurysm of the internal carotid artery, from a tumor of the brain which has broken into the orbit, or from a tumor in the orbit itself. Careful study, however, will differentiate these conditions from a true pulsating exophthalmos, which is always intracranial and indicative of an arteriovenous communication.

In considering the etiology, it will be noted that pulsating exophthalmos is a unilateral affection in the majority of instances. Of the three hundred thirteen cases reported up to 1907, only thirty-six were bilateral. The bilateral cases are dependent upon the normal anatomic communication between the two cavernous sinuses, the circular sinus. Thus it would seem that any case of unilateral exophthalmos should be considered as a possible pulsating exophthalmos until proved otherwise.

The following conditions are the principal causes of pulsating exophthalmos: Rupture of the internal carotid artery in the cavernous sinus; aneurysm of the internal carotid artery in the cavernous sinus; aneurysm of the ophthalmic artery both within and without the orbit; and tumors of the orbit, either within the orbit itself of from without, as in tumors of the brain and tumors of the accessory sinuses.

Rupture of the internal carotid artery in the cavernous sinus, or, as Dandy prefers to call it, the carotid-cavernous arteriovenous aneurysm, is by far the most common variety. The great majority of these cases are traumatic in origin. Of the sixty-nine cases collected by de Schweinitz and Holloway, fifty-four were due to trauma. Falls with associated head injuries, blows on the head, gunshot wounds, and punctured or penetrating wounds are the usual forms of trauma. One of the earlier beliefs was that a basal fracture involving the body of the sphenoid bone with a spicule of bone penetrating the wall of the internal carotid artery caused the aneurysmal varix. With the study of more and more cases and the steady accumulation of facts brought out by autopsy, it was found that many cases of true pulsating exophthalmos show no evidence of direct trauma such as a basal fracture.

A diseased condition of the vascular system may be a predisposing factor. When we bear in mind that 60 per cent of the intracranial hemorrhages occur from rupture of the artery which supplies the anterior portion of the internal capsule and adjacent portion of the lenticular nucleus, the lenticulostriate artery, or, as Charcot called it, the artery of cerebral hemorrhage, we still have 35 or 40 per cent of the intracranial hemorrhages to be accounted for otherwise. When the bleeding takes place into the substance of the brain, the term

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cerebral apoplexy is applied; when the bleeding is into or beneath the membranes, it is termed meningeal hemorrhage. Obviously then, any intracranial hemorrhage will be subdural or extradural. Since the cavernous sinus is nothing more than a channel formed by a split in the dura, any hemorrhage into this sinus would be extradural. Therefore, as a matter of classification, we should think of pulsating exophthalmos as an extradural hemorrhage with symptoms which are for the most part extracranial.

Some of the morbid conditions resulting in intracranial hemorrhages are: Rupture of miliary aneurysms of the central and cortical vessels; aneurysm of the branches of the circle of Willis; and endarteritis and periarteritis of the cerebral vessels.

Those individuals past forty years of age who are subject to progressive renal disease and consecutive arteriosclerosis and hypertrophy of the heart are particularly liable to intracranial hemorrhages. Therefore, it is reasonable to suppose that an intracranial hemorrhage may occur by reason of rupture of an internal carotid artery which may be the seat of an arteriosclerotic process, such rupture taking place in the cavernous sinus, just as may occur elsewhere within the cranium. With this conception of the etiology and pathology of pulsating exophthalmos, the classification of Dandy is readily understood. If we think of a rupture of the internal carotid artery just after it pierces the dura, the picture changes to a subdural hemorrhage which in all likelihood would be severe enough to cause sudden death. If the rupture of the internal carotid artery occurs within the cavernous sinus, it is not death which we see but that spectacular thing called pulsating exophthalmos.

And now just a few words regarding the pathology and pathogenesis of this affliction. de Schweinitz says that among the three hundred thirteen cases reported up to the middle of 1907 there were forty-three autopsies which may be summarized as follows:

1. Aneurysm of the ophthalmic artery, three cases; two of these were within the orbit, one without the orbit.

2. Rupture of the internal carotid artery in the cavernous sinus, seventeen cases. Of these ten were traumatic, one was spontaneous and six showed rupture of an aneurysm of the internal carotid artery.

3. Aneurysm of the internal carotid artery, three cases.

4. Tumors, six cases.

5. Thrombosis of the cavernous sinus and of the ophthalmic veins without certain arterial communication, although possibly present, eight cases.

There were six cases listed as unclassified. Thus, it will be seen that of these forty-three autopsies the majority showed some disturbance of the internal carotid artery as it passes through the cavernous sinus.

The pathogenesis of pulsating exophthalmos is dependent upon increased pressure within the cavernous sinus. Since the ophthalmic vein is really the only structure to communicate with the cavernous sinus anteriorly, any increased pressure in the sinus, either from a pouring out of arterial blood from a rent in the wall of the internal carotid artery or simply the pressure of an aneurysmal sac of the artery, causes all the structures in the orbit to suffer. Stasis and dilation in the veins, followed later by reversal in the blood streams in the orbital veins with pulsation and great swelling in all the structures, must inevitably result. Again it is Dandy who has so tersely remarked that here in the cavernous sinus we may have an arteriovenous aneurysm with a tear in the wall of the artery only. Nowhere else in the body is there such a relationship between artery and vein.

The symptoms of pulsating exophthalmos are the result of a deranged circulation of the cavernous sinus. With a rent in the wall of the internal carotid artery the arterial blood is pumped directly into the sinus. Obviously the pressure of the arterial blood is greater than the normal venous flow in the sinus. Since the ophthalmic vein forms the apex of the cavernous sinus, all the structures in the orbit must suffer from any compromised flow in the ophthalmic vein. Venous stasis in all its forms and manifestations is the first outstanding symptom. The conjunctiva becomes red and swollen, and later becomes chemotic; the eyelids may be greatly swollen and edematous; the eyeball itself bulges forward and may be fixed; the retinal vessels may become overdistended and the retinal hemorrhages are frequent; the optic nerve also suffers from all this pressure, and papillitis or a real choked disc may complete the picture of intraocular damage. Two outstanding symptoms of this malady, pulsation and bruit, are caused by the impact of the arterial pulse on the venous blood within the cavernous sinus. This is true in both an arteriovenous aneurysm where the arterial blood mixes directly with the venous blood and where there is aneurysm of the wall of the artery but no rupture. In the latter the arterial impact is through the wall of the aneurysmal sac just as we see in aneurysm elsewhere in the body. The pulsation may be felt in the globe or the structures about the globe. The bruit, likewise, may be heard in different places about the eye; it varies in intensity and pitch and in different positions of the

patient. Pulsation and bruit are the two outstanding symptoms of pulsating exophthalmos.

The third and the fourth and the ophthalmic division of the fifth and sixth cranial nerves pass forward in the outer wall of the cavernous sinus to enter the orbit through the sphenoidal fissure, and they, too, may suffer from pressure leading to partial or complete paralysis of the muscles supplied by these nerves. According to de Schweinitz, the sixth cranial nerve is involved more often than the third, and the fourth is seldom implicated. Since the third nerve supplies all the extra-ocular muscles with the exception of the external rectus and the superior oblique muscles, and also the ciliary muscle and those fibers of the iris which contract the pupil, any pressure on the third nerve will give a variety of symptoms such as ptosis, dilation of the pupil, failure of accommodation, and marked limitation of the movements of the eyeball. Complete external ophthalmoplegia is seen when all three motor nerves are involved.

One should not conclude a discussion of the symptomatology without mentioning the danger of corneal involvement and of a partial or complete loss of vision. In some cases the eyelids are greatly swollen and do not approximate, and then corneal ulcerations may result from exposure. Neuroparalytic keratitis and vascularization of the cornea are other complications. Loss of vision may result from the various corneal lesions, but more often the blindness is caused by optic atrophy or optic neuritis.

I have little to say relative to the treatment of this condition. In the care of the only case I have ever seen the treatment was wholly symptomatic. Fortunately, this patient had a spontaneous recovery insofar as the major extracranial symptoms are are concerned. These facts will be brought out more fully in the history. However, for those who are interested in what may be found in the more recent literature regarding the treatment of pulsating exophthalmos, I quote from Dandy[1]:

"A carotid-cavernous aneurysm can be treated only surgically. Ligation of the internal carotid in the neck, either partially or totally, will effect a cure. Up to the age of thirty-five, total ligation of the internal carotid artery can be performed without harm. But after thirty-five, ligation carries too much risk. Partial ligation with a circular band of fascia can be done safely, and is probably just as effective. It should be gradually drawn around the artery and sutured when the thrill stage is reached. Before the age of fifty, one can use a band of thin rubber tubing. The reaction around the foreign body will gradually occlude the artery, causing complete obliteration in the neck in ten days. It is doubtful, however, whether this has any advantage over the permanent partial occlusion with a band of fascia. After the fiftieth year total occlusion, whether immediate or gradual, is too dangerous to the integrity of the cerebral hemisphere.

"Before attempting complete ligation of the internal carotid artery at any age, the effect of closing the carotid artery should always be tested beforehand by compressing it over a period of many minutes. If no adverse symptoms—dizziness, headache, syncope, motor, sensory or speech disturbances follow, the ligation may be safely done. If symptoms follow temporary compression of the vessel, partial ligation of the artery will be required.

"Pulsation of the eye disappears immediately after either partial or complete ligation of the internal carotid artery; the exophthalmos also recedes rapidly, the major part within 48 to 72 hours, and slowly thereafter. After partial ligation of one internal carotid artery in a woman aged 74 years, with extreme bilateral pulsating exophthalmos and complete blindness, the persisting exophthalmos was almost immediately reduced and soon disappeared. In 48 hours the vision which had been entirely lost was in large part restored."

CASE HISTORY

The patient was eighty-seven years of age. Her past history was not important. She had had arteriosclerosis for many years. The arteries were brittle, and calcified deposits could be felt.

She fell on December 26, 1931, striking the right side of her head. It was not believed that the fall came as the result of any intracranial condition but more because of failing coordination, the result of age. The patient was unconscious for perhaps ten or fifteen minutes; however, she was up and about as usual within a few days. Objectively, nothing came as the result of this fall, although she stated later that all winter she felt "stirred up" or confused in the head. At some time in the latter part of April, the exact date is unknown, the patient had a second fall. This time she fell forward, striking the back and left side of her head on a door casing at the foot of the stairs. She did not lose consciousness and went about her household duties as usual. Sometime during the night of May 6, which was possibly a week or ten days after this second fall, she was awakened by pain in the right eye. The next day there was redness of the sclera near the inner canthus which also extended into the conjunctiva of the adjacent part of the lower lid. This redness was decidedly localized and its appearance was suggestive of a subconjunctival hemorrhage. Unlike a subcon-

junctival hemorrhage, however, there was no fading out after a few days, but rather an increase in the area of redness with swelling of the conjunctiva. At this stage the patient began to complain of seeing double. On May 18 there was a rather sudden intensity of all the symptoms; the eyeball bulged forward and a definite exophthalmos was apparent. The eyeball deviated to the right and was fixed; the pupil was dilated. The swelling in both lids rapidly increased in severity. The bulbar conjunctiva was very red and chemotic. The conjunctiva of the lids became so edematous that it rolled forward onto the cheek. On May 23 pulsation and bruit were discovered. The pulsation could be felt easily at the upper inner angle of the orbit and below at the outer angle. With a stethoscope the bruit was distinctly heard. From May 18 to 23 it was definitely felt that there was some serious disturbance back of the eyeball, but it was only after the appearance of the pulsation and bruit that a diagnosis of pulsating exophthalmos was made. At this stage of the disease the general condition of the patient was not good. The pain was severe, and there was some mental disturbance as well. For three or four weeks the patient would answer questions but knew little of what went on around her; she slept most of the time.

The treatment was entirely symptomatic. Sponging the eye with pledgets of cotton dipped in hot water gave the most relief. An ointment of butyn and bichloride of mercury was soothing.

Within two months improvement set in. The swelling grew less and the edema of the conjunctiva gradually receded. There was a marked ptosis of the upper lid. The pupil remained dilated. The range of movement of the eyeball steadily improved. The vision was badly damaged. Fortunately, there was never any corneal damage. Even at the height of the engorgement, the paralysis of the levator palpebrae was marked. This permitted the upper lid to sag low and protected the cornea from exposure.

COMMENT

To summarize briefly, this was a case with a definite history of trauma in which the patient had fallen twice and had struck her head each time. Within a few days after the second fall there was evidence of venous stasis in the swelling and engorgement of the conjunctiva. With increase in the venous stasis, exophthalmos was added to the picture. Then came the arterial phenomena, pulsation and bruit. In this instance it would seem that the third cranial nerve and not the sixth received the brunt of the damage. The early diplopia, followed by the dilated pupil and the fixed eyeball, would indicate pressure on the third nerve. Since the eye was always turned to the right, it was believed that the sixth cranial nerve escaped injury.

What should we say is the cause of the spontaneous improvement? To speculate on this is very fascinating, but that is as far as it goes. I should say that possibly there was organization of the thrombus in the cavernous sinus which eventually sealed the small tear in the wall of the carotid artery. However, all this is mere speculation.

Note: This patient died at the age of ninety, having lived nearly three years after suffering from a pulsating exophthalmos. The case is one of very few spontaneous recoveries.

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THE TREATMENT OF GONORRHEA*

ANDREW C. WOOFTER, M.D., Des Moines

During the past five years, much progress has been made in the treatment of gonorrhea. Sulfanilamide, the first of the sulfonamides introduced, after a wave of enthusiasm was found to cure from 40 to 60 per cent of the cases. These rates of cure were based on adequate diagnosis, case study and follow-up as to symptoms, smear and culture. Some toxic manifestations resulted from sulfanilamide, most commonly dizziness, which was considered a potential occupational hazard.

Sulfapyridine was next introduced and found to be effective, but caused considerable nausea and vomiting.

At the present time, sulfathiazole is the drug of choice, although a recent survey by Finland et al[13] indicates that sulfadiazine may be less toxic. Chick embryo titrations convinced Bangs[11] that sulfathiazole is three times more effective therapeutically than sulfanilamide. Repeated series of cases adequately studied have established a rate of cure of 77 to 83 per cent. The purulent discharge disappears in 85 per cent of the patients before the end of one week, and symptoms are usually absent within a like period. Administration of the drug is by mouth for five days, one gram four times a day. A daily fluid intake of 1,500 cubic centimeters or more is advised and a physical examination required every forty-eight hours, the patient reporting sooner on the appearance of any untoward symptoms. If not asymptomatic and all cultures and smears do not remain negative, the same routine may be repeated. If there is no re-

*From the Division of Venereal Disease of the Iowa State Department of Health.

sponse to two courses, sulfonamide resistance must be considered and a decision made as to whether to employ very gentle local treatment or fever therapy. Rose et al[4] have pointed to the value of artificial fever in refractory cases. It is best to follow all cases for eight weeks or more with smears and cultures to avoid recurrence. Repeated serologic tests for syphilis for three months are advisable.

Sulfathiazole and other sulfonamides may cause a number of specific reactions. These include anuria, hematuria, dermatitis, anemia, hepatitis, conjunctivitis, fever, nausea and vomiting, and leukopenia. Most toxic manifestations may be discovered early if a search is made. Any decreased urinary output or discoloration of the urine can be significant. Dermatitis can be seen, as well as any pallor or jaundice of an anemia, jaundice from hepatitis, irritation of the conjunctiva, and the patient may complain of nausea or vomiting. Leukopenia can be found only by a white blood count. Danger from sulfanilamide compounds can be minimized by careful management of the patient.

At the present time, civilian physicians should not treat military personnel due to certain reactions which may be encountered.

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OFFICE PROCEDURES IN OPHTHALMOLOGY*

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The purpose of this paper is to bring before you some of the procedures which have proved of definite value in our practice. On first thought some of these may seem trivial. However, we admit that our success as practitioners depends upon the many small things we do, rather than on an occasional isolated triumph. It is with this in mind that I take the liberty of occupying your time with what may appear to be unimportant. I hope you may obtain something of value from the things I am about to say. I also hope that I may stimulate an active discussion. If you disagree with me, or have a better procedure, I should like to hear you speak. We all agree we are here to learn of the better things in the practice of our profession.

The first thing which I wish to mention is the use of the Zeigler punch cautery in the correction of entropion and ectropion. This method has proved so satisfactory that it has almost entirely replaced the surgical procedure. Most of the ectropions are of the spastic type, occurring in older patients who are usually reluctant to have an operation. The fact that no hospitalization is necessary, that the after-treatment can be self-administered, and that the treated eye is not bandaged, is of paramount importance to this class of patients.

The usual poor result of the Zeigler punch cautery can be accounted for by our failure to understand the anatomic relation of the orbicularis muscle to the lid. The normal position of the muscle is to describe an arc vertically through the lids and also horizontally over the curvature of the eyeball. Due to the loss of the orbital tissue, the eyeball recedes and these two arcs become a chord. The muscle is wider than is generally believed and extends the entire width of the lid. The lower one-half of the muscle is stronger. This is a point to keep in mind when placing the cautery punches. Any irritation of the eye, such as a foreign body, may produce a spasm of the muscle and a turning in of the redundant margin of the lid. The in-turned cilium now produces the irritation necessary for the maintenance of the spastic condition. The removal of the original cause is not sufficient to effect a cure. We must weaken the muscle sufficiently to remove the spastic condition. It should be remembered that the immediate result is obtained by swelling of the tissue and the local anesthetic. The permanent result

*Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.

comes five or six days after the operation. The failure to recognize this has caused other methods to be used before this procedure has had a fair chance.

The procedure is relatively simple. We must, however, keep in mind that the orbicularis muscle is wider than generally believed and that the lower one-half is stronger. The punches must be placed lower on the lid area and preferably closer together. They should extend the entire width of the lid from side to side in two or three rows. The rows and each punch therein should be two to three millimeters from each other. A pointed loop of the cautery is used when red hot. It is introduced through the skin until the point meets the tarsus with definite resistance. It is left there for a split second and then withdrawn. White's ophthalmic ointment is applied. No bandage is necessary.

The first sign of an ectropion is the retraction of the punctum lacrimale from the eyeball. This brings about lacrimation which necessitates the frequent wiping of the eye. The wiping is always done with a down stroke on the lower lid, causing an out-turning of the lid. The moisture causes an excoriation of the skin which leads to a loss of elasticity. The hypertrophy of the conjunctiva is difficult to deal with in all surgical procedures. The punch cautery deals effectively with the phase of pathology. Numerous punches placed close together from the conjunctival side, firmly against the tarsus, destroy the thickened layer of the conjunctiva. Good results from this procedure are obtained four to six weeks after the operation. The final turning in of the lid is accomplished by the healing and contracture of the conjunctival tissue. The scar in the conjunctiva is not excessive and does not affect the cornea.

This procedure is also of great value in the prevention of ectropion. If the lacrimation is due to the punctum lacrimale being retracted from the eyeball, a few punches below the canaliculus will draw the lid toward the eyeball and re-establish the normal relation of the punctum lacrimale.

ANESTHESIA FOR LACRIMAL PROBING

The probing of the lacrimal canal can be a painful procedure, especially when large probes are used. The following method in the extreme cases has been highly satisfactory. A suitable local anesthetic, such as 0.5 per cent pontocaine, is dropped over the punctum lacrimale several times. A hypodermic needle on a small syringe containing 2 per cent cocaine is introduced into the lower canaliculus, and is passed slowly into the canaliculus toward the nose; some of the cocaine is liberated as the needle passes inward. When the inner wall of the lacrimal sac is encountered, the needle is inserted into the wall and one or two drops are injected. In a few moments the entire sac is anesthetized. The injection of the anesthetic does not alter the anatomic relation of the duct. To further insure against discomfort, it is advisable to anesthetize under the inferior turbinated bone. It must be kept in mind that the failure to keep the nasolacrimal duct open is not always due to the lack of its patency, but may be due to the loss of function of the sac. In this case lacrimal probing, regardless of its perfection, is of no value.

THE PREPARATION OF PATIENTS WITH GLAUCOMA FOR OPERATION

The surgical results in glaucoma are always better if the congestion of the eyeball can be reduced to a minimum. Any preliminary medication must be directed toward the reduction of intraocular tension. During the last few years, we have used hypodermic injections of morphine 0.25 per cent and pilocarpine 0.125 per cent four times a day for one or two days before operation. Either pilocarpine 0.5 per cent, or no solution at all, is used in the eye. The eye loses its congestion and the tension often is markedly reduced just before operation. We have had much better results in all forms of surgery for glaucoma since we have used the above procedure. Our results in trephines has been particularly improved. The postoperative reaction is at a minimum, the filtering blister is larger, which naturally gives a better filtering result.

MARGINAL PAPILLOMA OF THE EYELID

The presence of papilloma or warts on the margin of the lid is frequently associated with an irritation of the conjunctiva which resists all form of treatment. These growths need not be in contact with the eyeball to produce this condition. The removal of the small growths by actual cautery, or with a scissors and application of 50 per cent trichloro-acetic acid to the base, is satisfactory. This tends to clear up the congestive process. The way in which these growths are responsible for this congestion is not clearly understood; it is possible that the growths prevent the complete closure of the lids and cause exposure of the conjunctiva in sleep.

THE USE OF WEAK MERCUROCHROME SOLUTION IN IRRIGATION OF THE NASOLACRIMAL DUCT IN INFANTS

The patient is given the usual short ether anesthesia. The punctum lacrimale of the lower canaliculus is dilated. The lacrimal needle is inserted into the canaliculus and normal saline solution made pink with mercurochrome is forced in with

moderate pressure. After one cubic centimeter of the solution has been forced in, the child is turned on the side. If the irrigation has been successful, the red solution will come out the nose. If this does not occur, a tongue blade is introduced into the pharynx and the end of it will become red. The appearance of this colored solution confirms the success of the operation and removes the possibility that the fluid may have entered the surrounding soft tissue. The infiltration of this fluid into the orbital tissue will not cause any discoloration or serious after effects.

PROTECTIVE GLASSES FOR PEOPLE WITH ONE EYE

For many years we have believed that people with only one eye should wear protective glasses. This is especially true if they have been accustomed to binocular vision and because of an accident have lost one eye. These people are more handicapped by loss of depth perception and restricted visual field than people with amblyopia who have compensated for these functions. They are, therefore, more liable to other accidents. We have seen many instances in which glasses prevented serious injury to the eyeball. We have also seen cases where the vision was lost in the only remaining eye by a pellet or small piece of steel, injuries which could have been prevented by glasses. There are similar accidents in the industrial world which likewise could be prevented. Over a period of many years, we have had no serious injury to the eyeball by glass from a broken lens. The minor facial cuts have been, as a rule, from rimless glasses, and for this reason we believe that metal or shell rim glasses offer greater protection.

ANESTHESIA FOR REMOVAL OF CHALAZION

The location of the chalazion determines the approach used in this operation. If the mass of the chalazion is movable over the tarsus, or if it fails to discolor the conjunctiva, the incision is made through the skin and the cyst is removed externally. If, however, the mass is fixed in the tarsus and the conjunctiva is discolored, the approach is from the conjunctival side. The management of this type of case is so simple that we have made it an office procedure. The anesthesia differs for the two types of operation. For the external approach 0.5 per cent solution of potocaine is instilled on the conjunctiva. A solution of 1 per cent procaine hydrochloride with epinephrine is infiltrated over and around the chalazion from the skin side. The cyst sac is removed with the usual surgical technic. The anesthesia for the removal of the chalazion from the conjunctival side consists of the instillation of a solution of 0.5 per cent and later 2 per cent pontocaine into the conjunctival sac. In a few minutes, procaine hydrochloride, 1 per cent, with epinephrine is injected under the conjunctiva to form a blister over the chalazion. Later the needle is introduced through the cavity of the chalazion and into the wall of the cyst on the skin side and two drops are injected. After five minutes, the lid is grasped with a ring chalazion forceps, the chalazion is opened with a large trephine, or a crucial knife incision is made through the tarsus. The cavity is thoroughly curetted. A 50 per cent solution of trichloro-acetic acid may be used to further insure the destruction of the sac, although this is not necessary if the curettage has been complete. The incision through the tarsus must be kept open for drainage. If the crucial incision is used, the corners should be clipped with scissors. A small amount of bleeding follows the removal of the ring forceps, but this is easily controlled by ice cold application. White's ointment should be given to the patient to use three times a day for several days. The eye should not be bandaged.

THE USE OF CATGUT SUTURE IN THE CONJUNCTIVA AFTER RECESSION OPERATION

In the young patient the removal of silk sutures from the conjunctiva after any surgical operation is always accompanied with much difficulty. For years, we have used the following procedure with success: After the recessed muscle is made fast with 0000 catgut, the remaining catgut is used to close the conjunctival wound. It is used in four interrupted sutures tied rather firmly with one single hitch knot. The ends are cut short. This leaves a small knot well buried in the conjunctiva. There is no irritation and the sutures are absorbed in five or six days. The eye should be covered for twenty-four hours.

THE OFFICE PROCEDURE OF EXPOSING THE UPPER CANALICULUS FOR DILATION AND IRRIGATION

When the patient is in a sitting position, the upper punctum lacrimale is usually hard to approach. The upper lid should be everted and held firmly in this position. This procedure exposes the punctum lacrimale and holds it practically immobile. The dilator and irrigating needle can then be introduced easily.

THE USE OF PRISMS TO CORRECT HYPERPHORIA IN PATIENTS WHO HAVE POOR VISION IN ONE EYE

There are many people who have an amblyopia of varying degree in one eye. This amblyopia may vary from the ability to distinguish light and shadow to vision which is almost normal. Many of these patients have a hyperphoria of varying

degree and are quite uncomfortable. It is possible that the hyperphoria is the initial cause of the amblyopia. The refractive error of the amblyopic eye should be carefully estimated and the degree of hyperphoria should be measured. A careful correction should be prescribed for eyes even if the vision is 20/70 or less. The correction of the refractive error and hyperphoria will result in greater comfort and often in the improvement of vision in the amblyopic eye.

THE USE OF A GOLD OR GLASS BALL IN THE SCLERA OR TENON'S CAPSULE AFTER ENUCLEATION OR EVISCERATION

The artificial appearance of the glass eye is due to two things: First, the two eyes are not on the same frontal plane, and second, there is a deep sulcus between the eyeball and the supra-orbital ridge. After enucleation or evisceration, the muscles are retracted into a mass of scar tissue and cannot impart motion to the glass eye. The mass is small and permits the glass eye to sink deep in the socket. Evisceration of the contents of the eyeball, leaving the sclera to form a mass in the orbit, is not a substitute for the implantation operation. The usual technic after enucleation, is the insertion of a gold or glass ball which fits loosely in the cavity. The Tenon's capsule is sutured horizontally with numerous interrupted silk sutures. The muscles are pulled forward and sutured to the anterior surface. The conjunctiva is sutured vertically. A small rubber drain is inserted through a stab puncture in the lower cul de sac to allow the escape of serum and blood from the cavity. This minimizes the reaction and reduces the postoperative discomfort.

The gold or glass ball can be sutured into the sclera with or without the removal of the cornea. The ball should fit loosely in the cavity. White silk sutures should be used in the sclera and need not be removed. This procedure gives the best cosmetic result. The rotation of the glass eye is good and the appearance is more natural.

THE USE OF AFTER IMAGE TEST FOR THE DETERMINATION OF ABNORMAL RETINAL CORRESPONDENCE

In all cases of squint it is very important to know if the patient has a normal retinal correspondence. This knowledge should greatly influence the outline of the treatment and the probable results. In patients with abnormal retinal correspondence, orthoptic treatment is unsatisfactory and surgical results are not good because the eye tends to regain its original degree of deviation. It is necessary to establish through orthoptic treatment a normal retinal correspondence before any other form of treatment is attempted. The knowledge gained from this test will enable one to give a well founded prognosis and eliminate the possibility of a poor result.

THE USE OF EVIPAL FOR EXTREMELY PAINFUL EYE CONDITIONS

The use of 0.5 grain of morphine, 0.01 grain of scopolamine, or a retrobulbar injection of 1 per cent novacain is usually sufficient to control pain in all cases. There are, however, painful eyes where the retrobulbar injection of novacain is not desired. In an effort to save the last flicker of vision in a glaucomatous eye, extreme precaution must be exercised. The injection of retro-orbital novacain is not preferable; in these cases evipal is of great help. The usual preoperative morphine and scopolamine are used one to one and one-half hours before operation. The contents of one ampule of evipal is diluted in twenty cubic centimeters of water and prepared for intravenous injection. The needle is introduced into the vein and held in position by an intern during the operation. The solution is injected at the rate of one cubic centimeter per minute. After four or five cubic centimeters are injected, the patient is asleep. Additional solution is injected when needed at the rate of about one cubic centimeter every minute. The anesthesia is complete, the patient is relaxed, and after the operation the patient usually sleeps for several hours. This procedure should not be used for patients with high blood pressure.

INSTRUMENT FOR THE TRANSILLUMINATION OF THE EYEBALL

Transillumination of the eyeball for intra-ocular neoplasm is essential. The transilluminators on the market are very satisfactory. In the event of an emergency, this instrument can be easily improvised, and for years we have had such an instrument as a regular part of our equipment. A curved antrum transilluminator is inserted into an ear speculum of medium size. The space between the transilluminator and the base of the speculum is covered with adhesive tape, which prevents escape of light and holds the two pieces together. This instrument does not become too hot in the usual length of time it is held against the eyeball. The pupil is dilated and conjunctiva anesthetized for this examination.

THE USE OF NEMBUTAL PER RECTUM FOR VOMITING AFTER EYE SURGERY

Vomiting after eye surgery, and especially after cataract surgery, is always a serious complication and may result in loss of the eye. Medication by mouth is out of the question, and morphine and

its derivatives are not well tolerated. The introduction into the rectum of a three grain capsule of nembutal, which has been perforated at both ends, has proved of great help in alleviating this unpleasant condition. It is entirely safe, especially if tolerance of this drug has been previously established. Nembutal should be used in the preoperative preparation to determine the patient's reaction. It should be given on the first sign of nausea and repeated frequently to control the condition.

ALLERGIC EYE CONDITIONS

Allergic conditions of the eye are classified into two groups. In the first group the eye shows a marked conjunctival congestion and edema, associated with itching. This type can be called the cosmetic, or pollen eye. The second group is usually found in older patients and is characterized by marginal catarrhal tufts at the limbus. These occur at various times in groups varying in number from one to several and are always associated with considerable discomfort.

The treatment of the first group is to remove, if possible, the responsible allergen, which in this group is usually wave set, nail polish, perfume or face powder. In other instances, it may be occupational or seasonal. The offending allergen is not easily found. The patient is uncomfortable and is interested in immediate relief.

The following prescription has given us very good results:

Monohydrated sodium carbonate,
1 to 2 per cent.....0.5 ounce
Zinc sulfate, 0.25 per cent.....0.5 ounce
Adrenalin, 1:1000 .....20 minims
Pontocaine, 0.5 per cent.....20 minims

When these ingredients are mixed, there appears a slight flocculent precipitate, and because of this slight incompatibility, the druggist is reluctant to fill the prescription. Due to the fact that it has given definite relief to many patients, however, we dispense it from our office.

In the treatment of the second group, catarrhal tufts, we have obtained the best results from the following treatment: The eyeball is anesthetized with a solution of 0.5 per cent and later 2 per cent pontocaine. The catarrhal tufts are touched with 50 per cent trichloro-acetic acid on the pointed end of a broken wooden applicator. White's ophthalmic ointment is applied to the eye, after which the eye is covered with a pad. The patient is given a zinc adrenalin prescription to use three to four times a day. Insulin in four unit doses is given daily.

TREATMENT OF STAPHYLOCOCCIC CONJUNCTIVITIS

The treatment of staphylococcic conjunctivitis is a difficult problem. There are no set rules which will cure all cases. The course of treatment at best is long and difficult. There are, however, several things we must do if we wish to have satisfactory results. The diagnosis must be confirmed in the laboratory. The conjunctiva should be well anesthetized and the conjunctival sac should be irrigated. A culture should be taken from the curettage of the conjunctiva and the pus expressed from the meibomian glands. A solution of 2 per cent zinc sulfate should be painted on the palpebral conjunctiva and the caruncle. The upper and lower canaliculus should be irrigated with a solution of 0.25 per cent zinc sulfate. This treatment should be repeated every three or four days.

The patient is given, for home administration, a solution of 0.25 per cent zinc sulfate with adrenalin, to use in each eye every two hours. The frequency of this medication is very important. It may determine the rapidity of improvement. The patient is also given 5 per cent sulfathiazole ointment to use twice a day. In the more obstinate case, sulfathiazole in doses of 30 to 60 grains a day given by mouth has proved very effective.

The procedure just described is not sufficient in many instances. It may be necessary to use staphylococcus toxoid. The patient should be tested intradermally for sensitivity to the toxoid. The initial dose is 0.1 cubic centimeter of number one solution. The increase is generally 0.1 cubic centimeter given at three to four day intervals. As the dosage increases, the interval may be prolonged.

THE USE OF THE CATARACT WAFER LENS

The main objection to the regular cataract lens is the weight. This causes the frame to tilt and excessive weight produces a pressure sore on the side of the nose. A lens which will counterbalance the frame only adds more weight and increases the discomfort. The wafer cataract lens solves this problem. The weight of a twelve diopter wafer lens is less than two drams. The weight of a regular cataract lens of the same strength is more than three and one-half drams. The wafer lens is made in two pieces and cemented together. The base contains the cylindrical correction and the wafer, the bifocal and spherical correction. The one disadvantage of this lens is the crystallization of the cement after about one year. The cost for this repair is very small, however, and is usually taken care of by the optical company. The favorable response this lens receives from the patients warrants its use.

Discussion

Dr. Orval L. Thorburn, Ames: In my opinion, Dr. Dvorak has given us a very practical and worthwhile paper. The valuable procedures he has described have necessarily been treated briefly because of limited time. Many of the details have undoubtedly been omitted and you will have many questions to ask him concerning any one of the procedures in which you are particularly interested.

I agree with him thoroughly that these seemingly minor points in office practice are of vital importance and I want to emphasize this. Our patients are, after all, more grateful for the relief obtained in the skilful handling of these little things than they seem to be from the more dramatic operative measures. They are also valuable because of the time saved for both the doctor and the patient; and in some cases because of the superior results obtained. We all like to talk about our unusual cases and especially if they have turned out favorably. Dr. Dvorak has had the courage to speak of the little, but important, everyday procedures of ophthalmic practice.

I was interested in what Dr. Dvorak said about protective glasses for people with one eye. I agree with him that glasses are a definite protection against eye injury, but I have not been so fortunate in their rôle as a complete protection. In the last number of years I have seen one eye lost and one badly injured by glass cuts from broken rimless lenses. For many years I have felt that glasses in frames furnished almost complete protection because I had seen several broken but no eye injuries. Then a doctor came in with a serious puncture wound of the cornea resulting from the lens in a frame broken by a golf ball struck at close range. Laminated and case hardened lenses must be used in frames and do offer superior protection, but I have not found them very practical except in industry because of their greater weight and heavy appearance.

Another point on which I wish to comment is anesthesia for removal of chalazion. I have followed the same procedure except that I use 2 per cent novacain instead of 0.5 per cent pontocaine for injection and find that I get very satisfactory anesthesia by one injection of about 0.5 of a cubic centimeter of novocain through the conjunctiva into the soft tissue of the retrotarsal fold. This offers little or no resistance, and necessitates only one injection. I have always felt that pontocaine was more toxic and should be used with greater risk.

Dr. Garfield M. Thein, Oelwein: This paper by Dr. Dvorak is both interesting and instructive. The fact that it is limited to cases and troubles which occur daily in our offices makes it even more valuable.

The description of the use of the Zeigler Punch in relation to anatomy of the orbicularis muscle is good and is worthy of a trial. I have not used this method so I am not able to comment on its merits.

I have used anesthesia for probing the canal, and it is successful. However, I cannot say as much for the end result of probing. This is, of course, due to the lack of function of the lacrimal sac. The people must be trained to pay more attention to tearing and seek relief before loss of function of the sac is developed.

Glaucoma is much more prevalent than was usually thought and any treatment which will improve results will be acceptable. The preoperative treatment to reduce congestion is excellent. Intravenous anesthesia of evipal or pentothal sodium is a valuable addition to eye, nose and throat surgery.

The results of papilloma of the eyelids removed by actual cautery under local anesthesia are very good. The eye needs no dressing and gives little inconvenience to the patient.

The use of protective glasses in all industrial work should be obligatory. They materially reduce the eye injury cases and cause only moderate inconvenience. I can recall only two serious eye injuries from broken lenses, and I do not doubt that the eye injury would have been as great, regardless of whether or not glasses were worn. Certainly the individual with but one eye should use every means to protect it.

The use of mercurochrome to detect patency of the lacrimal duct is a good procedure and not difficult. I should like to know the doctor's procedure if the canal is not patent.

I have used a similar procedure for years for the removal of a chalazion and the results are good; no great pain is experienced, and no dressing is needed.

I have hesitated to use catgut sutures in the conjunctiva because of the danger of absorption taking place too quickly; for that reason I ordinarily use black silk.

I have used prisms in most cases in which there was a definite hyperphoria if the vision in the poor eye is 20/100 or more. I have found them uniformly satisfactory.

Dr. Dvorak's transillumination set is both unique and practical and is an example of being able to help oneself if the necessity arises.

THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

LOBAR PNEUMONIA WITH ACUTE AGRANULOCYTOSIS

F. P. McNAMARA, M.D., Dubuque

The mortality rate of lobar pneumonia has fallen markedly during the last five years. This has been due to our better knowledge of the different types of pneumococci, the development and more extended use of antipneumococcus sera in some forms of the disease, the more effective use of oxygen therapy, and especially because of the use of the sulfonamides. In spite of these aids to diagnosis and treatment, however, there continue to be exceptional cases in which the infection apparently overwhelms the natural defenses of

the body. The following case in which agranulocytosis occurred is fortunately a rare example of such a complication.

CASE REPORT (42830)*

Chief Complaint: The patient, a white man 51 years of age, was admitted to the Finley Hospital on November 8, 1942, with a complaint of cough, difficulty in breathing and pain in the left chest.

Family History: Irrelevant.

Past History: The patient had pneumonia twenty-five years prior to this time and had had what he termed a bronchial cough at times ever since. In general his health had been good and he had been an active worker all his life. He had never taken drugs of any kind.

Present Illness: Five days before admission the patient caught cold but worked until the day before being admitted to the hospital. At that time he started to work as usual but suffered a chill which lasted fifteen minutes; he then returned home. He was seen about thirty-six hours later because his symptoms had increased in severity.

Physical Examination: The patient was a well developed and nourished white man who appeared very ill. The respirations were labored and were 35 per minute. The skin was pink and moist. The eyes were clear and the pupils reacted promptly and equally. The nose and ears were negative. The teeth were in fair condition and there was no inflammation of the gums. The tongue was dry and coated, and the throat was reddened. The heart rate was rapid (120 per minute) but otherwise was not notable. The blood pressure was 90/70. On percussion there was dullness over the left lower lobe which was most marked posteriorly. Coarse, sloppy, bronchial râles were heard over both lung fields. The abdomen was distended but no masses or points of tenderness were found. The genitals and extremities were unremarkable. A provisional diagnosis of pneumonia was made and the patient was given a 7.5 grain sulfathiazole tablet at three hour intervals for seven doses—a total of 52.5 grains.

The next afternoon the pulse was 130 per minute, the respirations were labored and were 40 per minute; the dullness in the left lung was more extensive; the blood pressure was 100/70; and the patient was advised to enter the hospital.

Course in Hospital: The patient's temperature was 104 degrees; the pulse was 160 and weak; and the respirations were 45 per minute. He was placed in an oxygen tent.

The first white blood count taken two hours after admission was 1,100 and the differential count showed no granulocytes but did show lymphocytes, monocytes, myelocytes, blasts and Rieder's cells. He was then given a blood transfusion of 500 cubic centimeters of citrated blood along with 500 cubic centimeters of physiologic salt solution. The next morning the white blood count was 1,800 but no granulocytes were found. The patient died twelve hours after admission.

Final Clinical Diagnosis: Left lobar pneumonia with agranulocytosis.

AUTOPSY ABSTRACT

Externally the body, which was that of a well developed and nourished white male, was unremarkable. The abdominal viscera were negative except for minor changes due to early arteriosclerosis. There was no excess fluid in the chest but there was a little fibrinous exudate over the lower lobe of the left lung. Each lung also showed a few fibrous adhesions in the posterior portions. The right lung was irregularly congested and edematous but there was no consolidation. The left lung was heavier than normal and the lower lobe was greatly enlarged. On section it was consolidated and on pressure the gray surface exuded a little purulent fluid. The heart was dilated on the right side but otherwise showed only a few arteriosclerotic plaques at the bases of the mitral cusps. The only other finding was an acute superficial ulcer on the lesser curvature of the stomach. Sections of bone marrow showed only an occasional promyelocyte but no mature cells of the granulocyte series.

Primary Anatomic Diagnosis: Left lobar pneumonia and fibrinous pleurisy; acute congestion and edema of the right lung. Acute agranulocytosis. Acute gastric ulcer.

Subsidiary Anatomic Diagnosis: Bilateral fibrous pleurisy. Arteriosclerosis.

COMMENT

The most interesting feature of the case is the rapidly fatal course of the lobar pneumonia apparently due to the agranulocytosis. Whether the latter was the result of the infection, the sulfathiazole, or the combination of the two cannot be decided because of inadequate studies. It is unfortunate that the blood was not studied during the period from the onset of the patient's illness until the time of the chill and subsequently during the administration of the sulfathiazole. In this manner it might have been determined whether the case was one of lobar pneumonia with leukopenia progressing to agranulocytosis or whether after the administration of the drug, the leukocytosis usually found in lobar pneumonia rapidly

*I am indebted to Dr. C. C. Lytle for the Clinical Record.

changed to agranulocytosis. It is difficult to conceive of the sulfathiazole alone producing such a blood picture, and probably it was the infection or the combination of factors acting in this instance.

GENERAL DISCUSSION

It is usually recognized that patients with lobar pneumonia and leukopenia have a less favorable prognosis than those with the usual leukocytosis. In general the greater the leukopenia, the graver the prognosis. Menninger[1] reported one fatal case of lobar pneumonia in which the average of five white blood counts in a period of twelve hours was 233 per cubic millimeter. The lowest count was 150 and an average of only 5 per cent of the leukocytes were polymorphonuclears. He stated that this was the most extreme leukopenia he had found in the literature and that Chatard had reported the lowest count as 2,500 in a series of 582 cases of lobar pneumonia. Middleton and Gibbon[2] noted that all patients with leukopenia of less than 5,000 leukocytes per cubic millimeter died. Even those patients with a relative leukopenia of 5,000 to 10,000 per cubic millimeter had a much higher mortality than those with leukocytosis.

Kodama and his associates[3] found that in a series of 114 cases of lobar pneumonia with 61 recoveries and 53 deaths, leukocytosis was a predominant feature in practically all cases. It occurred immediately after the onset and continued throughout the course of the disease. In cases with a favorable diagnosis, the leukocytosis reached its maximum just before resolution by either crisis or lysis. The general average count was much higher in cases of resolution by crisis than by lysis. Leukopenia was practically always a sign of poor prognosis, and in one fatal case the blood picture was indistinguishable from agranulocytosis. The leukocytosis of lobar pneumonia is due to the absolute increase of neutrophilic granulocytes, and death frequently resulted in patients with neutrophilia of 70 per cent or less while those with 90 per cent had better recuperative power.

The above studies preceded or were unrelated to the administration of sulfonamides. Since these drugs have become such important and valuable weapons in the fight against many infections there have been a few reports indicating that they may cause severe leukopenia or even agranulocytosis. These have been in severe infections which in time would in all probability have been fatal whether the drugs were used or not. Sailer[4] reported one case of subacute bacterial endocarditis with agranulocytosis after the administration of 282.6 grams of sulfanilamide over a period of twenty-three days. Friedberg[5], in a discussion of leukopenia in patients with lobar pneumonia, was of the opinion that the leukopenia was the result of the infection itself and that any measure, such as the administration of the sulfonamides which tends to overcome the infection, should benefit the leukopenia by removing the causative factor. He pointed out that leukopenia and neutropenia occurred only after the administration of sulfapyridine for two weeks or longer and in a total dose of 50 grams or more. In two cases of lobar pneumonia he found prompt improvement in the leukopenia following the administration of sulfapyridine.

Spink and Hansen[6] compared the therapeutic value and the toxicity of sulfanilamide, sulfapyridine and sulfathiazole and concluded that the latter was no more toxic than the others. They did not mention leukopenia as having occurred in a series of 33 cases of lobar pneumonia treated with sulfathiazole. However, Leser[7] noted that Long and Bliss, while treating 271 patients for a "variety of disorders with sulfathiazole found that leukopenia and granulocytopenia occurred but not a single case of acute agranulocytosis." Leser also stated that up to 1941 no deaths from acute agranulocytosis had been reported following sulfathiazole therapy. He reported one such death in a case of angina. Kennedy and Finland[8] had previously reported one case of bacterial endocarditis in which acute agranulocytosis apparently resulted from the administration of sulfathiazole following sulfapyridine. Hoyne and Larimore[9] also reported one death as due to agranulocytosis with severe membranous and gangrenous pharyngitis following prolonged sulfathiazole therapy for gonorrhea. Much of the drug had been self-administered.

In conclusion, the consensus seems to be that leukopenia progressing to agranulocytosis may be a rare complication of many severe infections including lobar pneumonia. Agranulocytosis has also been reported in at least three instances following sulfathiazole therapy. Two of these were subacute endocarditis, which is generally recognized as having a fatal outcome, and a third due to gangrenous pharyngitis with an equally grave prognosis. While this complication is rare, fortunately, it indicates the need for frequently repeated blood studies during all severe infections and especially in those in which prolonged medication with the sulfonamides is required. In the case cited the agranulocytosis is believed to have been due to the infection rather than sulfathiazole since only 3.5 grams of the drug were administered.

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FOUNDATION PRIZE OFFERED BY AMERICAN ASSOCIATION OF OBSTETRICIANS, GYNECOLOGISTS AND ABDOMINAL SURGEONS

The Journal has been requested to announce the prize award contest of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons and publish the following rules governing the award:

"The award which shall be known as 'The Foundation Prize' shall consist of $150.00.

"Eligible contestants shall include only (a) interns, residents, or graduate students in Obstetrics, Gynecology or Abdominal Surgery, and (b) physicians (with an M.D. degree) who are actively practicing or teaching Obstetrics, Gynecology or Abdominal Surgery.

"Manuscripts must be presented under a nom-de-plume, which shall in no way indicate the author's identity, to the Secretary of the Association together with a sealed envelope bearing the nom-de-plume and containing a card showing the name and address of the contestant.

"Manuscripts must be limited to 5,000 words, and must be typewritten in double-spacing on one side of the sheet. Ample margins should be provided. Illustrations should be limited to such as are required for a clear exposition of the thesis.

"The successful thesis shall become the property of the Association, but this provision shall in no way interfere with publication of the communication in the journal of the author's choice. Unsuccessful contributions will be returned promptly to their authors.

"Three copies of all manuscripts and illustrations entered in a given year must be in the hands of the Secretary before June 1st.

"The award will be made at the Annual Meeting of the Association, at which time the successful contestant must appear in person to present his contribution as a part of the regular scientific program, in conformity with the rules of the Association. The successful contestant must meet all expenses incidental to this presentation.

"The President of the Association shall annually appoint a Committee on Award, which, under its own regulations shall determine the successful contestant and shall inform the Secretary of his name and address at least two weeks before the annual meeting."

Manuscripts should be sent to James R. Bloss, M.D., Secretary, 418 Eleventh Street, Huntington, West Virginia.

PLAN FOR OBSTETRIC CARE AT THE UNIVERSITY HOSPITALS FOR SELECTED CASES

The purpose of this plan is to provide, at the expense of the Iowa State Department of Health, "Ward Special" delivery care at the State University of Iowa Hospital for eligible mothers whose expected baby's father is in the military service of the United States.

Eligibility: All mothers living in Iowa, regardless of their legal residence or marital status, who are in need of obstetric care at the time of delivery and whose expected baby's father is in military service (United States Army or Navy, including Marine Corps and Coast Guard) and not a commissioned officer, are eligible for "Ward Special" maternity care at the University Hospitals at Iowa City, provided other delivery care is not readily available or the expectant mother is not eligible for regular commitment to the University Hospitals.

Services: In addition to medical and hospital delivery and postpartum care at the University Hospitals in Iowa City, transportation to and from the hospital will be provided by its ambulance service.

Authorization: An application form provided by the State Department of Health is to be completed as follows:

1. Part 1 is to be filled out by the expectant mother.

2. Part 2 is to be filled out by her physician.

3. The completed form is to be returned to the Division of Maternal and Child Health, State Department of Health, Des Moines, Iowa, for authorization.

The patient, the attending physician, the University Hospitals, the local health department or public health nursing service will be immediately notified when the service has been authorized.

Costs: As long as funds are available, all costs of delivery and postpartum care and transportation to and from the University Hospitals will be defrayed by the Iowa State Department of Health on the basis of the cost of "Ward Special" care. In addition, the department will pay the attending local physician the usual fee of three dollars for committing patients to the University Hospitals.

STATE DEPARTMENT OF HEALTH

Walter L. Bierring

DENTAL-MEDICAL INSTRUMENT DRIVE SUCCESSFUL

Four new Coast Guard stations will be equipped with medical and dental instruments contributed by Iowa doctors, dentists and others in the recent salvage campaign conducted by radio and the press throughout the state, according to word received from New York.

Iowa's donation—a total of 76 boxes weighing approximately 5,000 pounds—was received about the middle of December by the Medical and Surgical Relief Committee of America, 420 Lexington Avenue, New York, which is sponsoring a national drive to obtain old instruments for reconditioning and eventual use by the armed forces and our allies.

In addition to the contributions which came direct from Iowa, the shipment also included donations by doctors, dentists and lay persons in various occupations in Wyoming, Minnesota, Arkansas, South Dakota, Montana, Colorado, New Mexico, Oklahoma, West Virginia, Kansas and Georgia.

By coincidence, when the Iowa shipment arrived in New York, according to Joseph Peter Hoguet, M.D., the national committee's medical director, members of the United States Coast Guard were visiting committee headquarters.

"They saw the shipment," Dr. Hoguet said in a letter to Walter L. Bierring, M.D., state health commissioner, "and volunteered to help sort out the instruments and to take out enough to set up four new Coast Guard stations. This is simply an illustration of how valuable and how opportune this gift is."

Chairman of the medical phase of the Iowa campaign was Robert L. Parker, M.D., Des Moines, while Harry A. Hurd, D.D.S., of the same city led the drive for dental instruments. The major share of the publicity was handled by Bob Burlingame, newscaster for Radio Station WHO, Des Moines, and the contributions for which he asked nightly for the duration of the campaign were received and shipped by the Iowa State Department of Health.

Commenting on the shipment, Dr. Hoguet stated in his letter, "Your very remarkable collection of instruments arrived at our headquarters yesterday. It is a really wonderful accomplishment to have collected this amount of material.

"Please accept the sincere thanks of the Medical and Surgical Relief Committee and my own personal gratitude for this work and let everyone who cooperated with you know how much the Committee appreciates it."

EIGHTH PNEUMOCOCCUS STUDY COURSE

A pneumococcus study course (the eighth in number of the three-day pneumonia laboratory courses conducted in Iowa during the past four years) will be held Tuesday, Wednesday and Thursday, February 16, 17 and 18, 1943, in the Medical Laboratories Building in Iowa City. The course, sponsored by the State Department of Health and made possible from funds appropriated through the United States Public Health Service, has been arranged in cooperation with Milford E. Barnes, M.D., Director of the State Hygienic Laboratory. Emphasis of the course will be on bacteriologic diagnosis, including the Neufeld Method and the technic of mouse inoculation.

Thirty persons, practically all of them hospital laboratory workers from twenty different counties, have registered for attendance.

REPORTING OF EPIDEMIC KERATO-CONJUNCTIVITIS

The following letter, forwarded under date of January 15, 1943, will be of interest to readers of the JOURNAL:

To: Physicians and Industrial Managers of Iowa.

Subject: Epidemic Keratoconjunctivitis.

It is desired to call attention to the possibility of occurrence, particularly among industrial workers in this area, of cases or of an outbreak of an acute eye disease of communicable character and

probably of virus origin, known as epidemic keratoconjunctivitis. Since September, 1941, this disease has developed epidemic proportions in California, Connecticut, Michigan, New York and other states.

Enclosed is further information pertaining to this unusual eye disease, diagnosis and treatment of which are difficult and isolation and prevention of which are closely allied with the war effort.

A significant article by Hogan and Crawford entitled "Epidemic Keratoconjunctivitis" appeared in the issue of *War Medicine* for November, 1942, pp. 984-994. *Industrial Hygiene* (December, 1942), a monthly publication of the Division of Industrial Hygiene, United States Public Health Service, Bethesda, Maryland, contains a concise summary of the malady and of control measures.

Should cases of this disease be observed or suspected, it is requested that prompt report be made to the State Department of Health. It is suggested that in differential diagnosis, careful consideration be given to allergic conjunctitvitis and to Parinaud's conjunctivitis, the latter described as infectious and of animal origin.

Thanking you for your interest in the notification of communicable and reportable diseases, I am

Very sincerely yours,
Walter L. Bierring, M.D.
Commissioner of Health.

Respectfully forwarded:
Charles W. Harness,
Commissioner of Labor.
Frank P. Winkler, M.D.,
President, Iowa State Medical Society.
James E. Reeder, M.D.,
Chairman, Committee on Industrial Health,
Iowa State Medical Society.

EPIDEMIC KERATOCONJUNCTIVITIS*

Causative Agent: Presumably a virus.

Incubation Period: 7 to 12 days.

Means of Transmission: (1) Direct Contact. (2) Contaminated hands, instruments or towels.

Diagnosis: (1) Edema of one or both lids. (2) Moderately profuse lacrimation. (3) Acute follicular conjunctivitis. Palpebral and bulbar conjunctivae are both involved. (4) Early lymph gland involvement, usually with swelling and tenderness of pre-auricular nodes. (5) Negative culture for bacteria. (6) Development of pseudomembrane in conjunctival sac. (7) Smear of conjunctival scrapings shows mixed response with predominance of mononuclear cells. (8) Development of corneal opacities; this is a late, not an early development. (9) Opacities are small grayish areas below the epithelium, probably in Bowman's membrane.

Course: In the early stages of the disease diagnosis is difficult, and enlargement of the preauricular gland should be noted. The conjunctivitis usually persists ten days or longer; the corneal opacities usually appear when conjunctivitis seems to be disappearing. The usual therapeutic agents are of little or no use and no specific therapy is yet available. About 50 per cent of the cases show bilateral involvement. The disease has been known to persist as long as eight weeks. In one epidemic 85 per cent of the cases were complicated by corneal opacities.

Treatment: There is no specific therapy. Sulfonamide ointments and Roentgen therapy have been used extensively. Cold rather than hot compresses seem to produce more relief from discomfort.

Recommendations: (1) Meticulous cleansing of hands and instruments by physicians, nurses and attendants. (2) Use of individual eye droppers. (3) Establish early diagnosis. (4) Isolation of infected patient. (5) Education of patient in measures of general cleanliness and eye hygiene.

Cases or outbreaks of this disease, real or suspected, *should be reported immediately* to the Iowa State Department of Health, Des Moines.

Research in the epidemiologic and bacteriologic aspects of the disease is being carried on under the direction of Dr. Murray Sanders, Columbia University School of Medicine, 630 West 168th Street, New York City.

*Adapted from an outline prepared under auspices of the Commonwealth of Massachusetts.

PREVALENCE OF DISEASE

Disease	Dec. '42	Nov. '42	Dec. '41	Most Cases Reported From
Diphtheria	12	14	8	For the State
Scarlet Fever	251	203	234	Polk, Scott
Typhoid Fever	4	7	3	Polk, Linn, Winnebago
Smallpox	3	1	7	Buchanan, Woodbury
Measles	192	135	304	Polk, Sac, Washington, Woodbury
Whooping Cough	144	58	74	Dubuque
Brucellosis	33	27	35	For the State
Chickenpox	497	271	411	Des Moines, Dubuque, Story, Woodbury
German Measles	22	11	4	Story
Influenza	0	10	7	For the State
Mumps	162	113	303	Allamakee, Cerro Gordo, Story
Pneumonia	86	38	169	Appanoose, Black Hawk, Clinton
Poliomyelitis	5	6	0	Allamakee, Hardin, Johnson, Warren
Tuberculosis	55	29	65	For the State
Tularemia	1	3	3	Black Hawk
Gonorrhea	113	111	69	For the State
Syphilis	263	210	195	For the State

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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Vol. XXXIII FEBRUARY, 1943 No. 2

SULFA DRUGS IN PROPHYLAXIS OF RHEUMATIC RECRUDESCENCES

One of the important experimental studies now going on in various parts of the country concerns an evaluation of the prolonged use of sulfonamides in the prevention of recrudescences in rheumatic subjects. The ravages of rheumatic heart disease in the tender years of life are too well known to require special comment, and any method of treatment which holds a promise of ameliorating the serious results of this disease deserves careful and thorough investigation. Several reports[1, 2, 3 and 4] have already appeared in the literature. Recently Hansen, Platou and Dwan[5] added their experiences as the result of a four year study on sixty-four children. The sulfonamide compounds used by these authors were sulfanilamide, sulfathiazole and sulfadiazine given in one to three grain divided daily doses from October to June. A comparable group of rheumatic children who did not receive sulfa drugs were used as controls.

Observations on a number of points were made. First and foremost, of course, was the effect upon the recrudescences in the two groups. The children who took the sulfonamides showed a striking superiority in this respect. Of the fifty-three children so treated, only two experienced rheumatic relapses. In one of these the relapse occurred within six days from the time the drug was begun, which the authors state is too short an interval in which to expect prophylaxis. On the other hand, seventeen of the thirty-two control children experienced a total of twenty-one recrudescences. Six of the children developd chorea. The results obtained by the other investigators mentioned earlier are approximately the same as those obtained by Hansen et al. It seems fair to conclude, then, that so far as present studies have gone the prolonged use of sulfonamides on rheumatic subjects in the winter months does prevent recrudescences during that period.

The question which comes to one's mind at once, however, concerns the safety of giving a sulfa drug in a dosage of one to three grains daily for six or eight consecutive months. Naturally, it was also a great concern of the authors, and all the subjects were kept under the strictest observation for signs of toxicity. Hemoglobin, total leukocyte, polymorpholeukocyte, and sedimentation rate estimations were made at frequent intervals. In only one instance did the leukocyte count drop low enough (1,700) to require stoppage of the drug. Other toxic manifestations were infrequent. That prolonged sulfonamide medication is not entirely devoid of danger, however, is indicated by the report of a death from granulopenia by Stowell and Button.[6] They further report that among the forty-six patients given sulfanilamide in their series, it was necessary to discontinue it in sixteen because of signs of toxicity. An observation made by Hansen et al to the effect that relatively small doses of sulfanilamide (20 grains daily) seemed to be fully as effective in preventing rheumatic recrudescences as larger amounts, would seem of great importance to note for those who contemplate employing this form of medication. The practice followed by the authors in the later stages of their study was to give 10 grains with each morning and evening meal.

The JOURNAL views with interest this further report on rheumatic prophylaxis. It is of the opinion, however, that much further investigation and observations made on many more subjects will be necessary before final acceptance of this promising procedure can be made. The evaluation of a sulfonamide compound, therapeutically efficient and without undesirable toxicity, may be the answer sought.

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3. Coburn, A. F., and Moore, L. V.: The prophylactic use of sulfanilamide in rheumatic subjects. Med. Clin. North America, xxiv:633-638 (May) 1940.

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THE NATIONAL PHYSICIANS COMMITTEE*

The confusion which now exists in the minds of the medical profession concerning the relationship of the American Medical Association and the National Physicians Committee should be clarified. The American Medical Association functions as a scientific organization. It deals directly with its members; it is a clearing house for scientific study; it promotes scientific investigations and disseminates this knowledge through its many publications. It has raised the standard of medical education to the highest in the world and, as you know, has done an excellent job of supervising the medical manpower supply in our present emergency. Its Bureau of Legal Medicine and Legislation keeps in close touch with legislative procedures which relate to the medical profession, but it cannot, under the present setup, maintain an active legislative committee similar to those maintained by the various state societies. Its Board of Trustees believes that it is not within its province to use its funds to disseminate medical or legislative facts through paid advertisements in the lay press.

The National Physicians Committee (NPC) is not an integral part of the American Medical Association. It has no official connection with it. It is officered by a group of men (officers of the American Medical Association, members of the House of Delegates, and men ranking high in the profession) who realized that immediate action was gravely needed and so organized to carry on a campaign to combat attempts to socialize medicine, to prevent adverse legislation, and to protect the medical profession from the constant criticism of its economic organization. The officers of this group command the respect and confidence of the medical profession as well as of the groups who oppose it. The organization is supported through voluntary contributions from medical men throughout the country.

The efforts of the NPC to inform the profession of its failure to realize its economic responsibilities and to promote an active interest in legislative procedures to combat socialized medicine are to be heartily commended. However, in trying to accomplish this objective, the NPC contacted state and county societies and many individual doctors. This led to confusion. A dual organization, one state and another NPC, was often set up in a single county. The doctors did not understand where their contributions were going or who was directing their distribution.

To eliminate this confusion, the Executive Council of the Iowa State Medical Society and the NPC have agreed upon the formation of a state NPC organization comprised of men who are familiar with Iowa problems, who have been more or less active in our state society, and who know our congressional delegation and have consulted with its members. Contributions to the NPC will be handled through this state committee, and all information from the NPC will also be distributed by this same committee.

The NPC has the endorsement of the Executive Council of the Iowa State Medical Society. We feel that much good will be accomplished, much adverse legislation discouraged, and confusion eliminated by the establishment of our own state committee to carry out this work in Iowa.

*From the Committee on Public Policy and Legislation.

THE COCOANUT GROVE DISASTER

The Journal earnestly recommends to its readers a careful study of the report by Faxon and Churchill, published in the December 26, 1942, issue of the *Journal of the American Medical Association,* concerning the experiences of the Massachusetts General Hospital in caring for victims of the recent catastrophe at the Cocoanut Grove night club. Tragic and regrettable as it was, the disaster nevertheless furnishes many lessons which should be taken to heart promptly by those in other communities who are responsible for making preparations to meet similar emergencies. It is a graphic recital of Civilian Defense blueprints transmitted into action. That the Massachusetts General Hospital staff was able to organize its personnel and its facilities so rapidly and so efficiently is deserving of the highest commendation and praise.

Some of the highlights as recorded by Faxon and Churchill are listed below:

One hundred and fourteen casualties were received in the emergency ward between 10:30 p. m. and 12:45 a. m., 75 of whom were dead or died within five to fifteen minutes after entering the door and 39 of whom were living but injured to varying degrees. Wet clothing was removed from the living patients. Burned surfaces were covered with sterile towels. All patients received ¼ grain of morphine sulfate. Burns (30 patients) were treated by a single method. Cleansing or débridement was not done. "Burned surfaces were covered with fine mesh gauze impregnated with boric ointment. Gauze, sterile mechanics' waste and cotton roller were utilized to form a bulky dressing. This was compressed snugly with elastic bandage to form a pressure dressing. Splints of folded newspaper, as suggested by the Red Cross, were used for the forearms and hands."

The first plasma was administered at 11:30 p. m. By 1:00 a. m. all patients in shock were receiving

plasma. In the first twenty-four hours following the disaster 120 units (250 cubic centimeters each) of frozen plasma was used on 33 patients. The largest quantity given to a single patient in the first twenty-four hours was 9 units (2,250 cubic centimeters). Low blood pressure was the first indication used for plasma administration. Hematocrit and serum protein determinations were available at 3:00 a. m. as an accurate guide to plasma requirements. Because of the difficulties encountered in some instances in carrying out the usual intravenous technic, the authors suggest that a wider use of intrasternal infusion might be used advantageously under such conditions.

Two grams of sulfadiazine was given intravenously at 2:00 a. m. to all patients. This was repeated at 10:00 a. m. and was continued thereafter, either intravenously or by mouth, in sufficient quantity to maintain blood levels of 5 to 10 milligrams per hundred cubic centimeters. Three thousand units of antitetanic serum was given to all patients except to Army and Navy personnel who were presumed to be protected by tetanus toxoid and to seven patients for other reasons. In addition, on the evening of the sixth day, all patients with a rectal temperature sustained at 101 degrees or above were given intramuscularly 5,000 units of penicillin in 5 cubic centimeter volume at four hour intervals.

Tracheotomies were performed on six patients who had inhaled flames and fumes. Four of these patients died.

All possible precautions were taken to limit infection. A solarium was converted into a dressing room, and the floor was scrubbed with strong antiseptic solution. All personnel in contact with the patients on admission or admitted to the ward were gowned and masked. Dressings were done with complete aseptic technic. One assistant removed the outer bandages, while others remaining uncontaminated changed and reapplied the inner dressings.

Of the 39 living patients which were received on the night of the disaster, none died in the next twelve hours. Seven deaths occurred in the following sixty hours, and at the time the report was written four patients were seriously ill.

In addition to describing the therapy administered, the gist of which has been enumerated above, the authors comment freely on the many other problems faced, upon the lessons learned, and make many pertinent recommendations which should be of great value to others. We believe it would be a wise policy if all medical Civilian Defense authorities would check their own plans item by item with this report by Faxon and Churchill.

NATIONAL CONFERENCE ON MEDICAL SERVICE

The seventeenth annual meeting of the National Conference on Medical Service, formerly the Northwest Regional Conference, will be held at the Palmer House in Chicago, Sunday, February 14, 1943. All physicians in good standing are cordially invited to participate, especially those who will be in Chicago to attend the meetings of the Council on Medical Education and Hospitals, Federated Boards, and the Association of American Medical Colleges.

Dr. J. D. McCarthy of Omaha, Nebraska, is president of the Conference and Dr. W. L. Burnap of Fergus Falls, Minnesota, is secretary. Registration will be from 9:00 to 9:30 a. m. There is no registration fee. The meeting will start at 9:30 and continue through the day.

Program

Analysis of Current Trends in the Control of Medicine

1. The Effect on Medical Education
   Eben J. Carey, M.D., Milwaukee, Wisconsin
2. The Significance to Medical Licensure
   Roy B. Harrison, Secretary-Treasurer, Louisiana State Board of Medical Examiners, New Orleans, Louisiana
3. The Outlook for Dentistry
   J. Ben Robinson, D.D.S., President Ex-officio, American Dental Association, Baltimore, Maryland
4. Hospital Problems
   Claude W. Munger, Chairman, Council on Government Relations Committee of American Hospital Association, New York City
5. The Challenge to Medicine
   Alfred W. Adson, M.D., Rochester, Minnesota

Question and Answer Period

Dinner.

Address: The 78th Congress
Congressman Woodruff of Michigan

Presidential Address
The North Central Medical Conference and The National Conference on Medical Service
J. D. McCarthy, M.D., Omaha, Nebraska

Medicine in the Post-War Era

1. Return of the Medical Officer to Private Practice
   Rollo K. Packard, M.D., Chicago, Illinois
2. Responsibility to the War Veteran
   C. H. McCaskey, M.D., Indianapolis, Indiana
3. Extension of the Social Security Program
   Carl F. Vohs, M.D., St. Louis, Missouri
4. Expansion of Public Health
   Ransom D. Bernard, M.D., Clarion, Iowa

Question and Answer Period

Income Tax Returns

There is a possibility that changes will be made in the 1942 income tax law by the incoming Congress, but these will probably be more in the nature of changes in the manner of collection for persons on a salary basis and will not affect professional persons whose income is dependent upon collections. The 1942 law sharply increases the rate of taxation in addition to lowering the personal exemption and credit for dependents, and the net result will be that each individual's income tax will be approximately three times as great as it was for 1941.

In order to make it easier for the physicians in Iowa to prepare their income tax blanks, the following table of deductions has been prepared and the doctors are advised to study it and be guided by it in computing their tax. The Federal Government rightly desires that every citizen shall pay his just due, but it does not want anyone to pay more than he should.

Physicians in Service: Military or naval service does not exempt you from income taxes. You are taxable in full for all pay received from the Army, Navy, or Coast Guard, and in addition you must report any other income you receive. Taxable income includes salaries or compensation of all types (foreign service pay or medal pay); the uniform allowance received when commissioned; and transportation charges paid by the government for the transportation of officers' families. Under nontaxable income are listed the following: commutation of quarters and rental value of quarters occupied by officers of the Army or Navy; money allowances for subsistence or rations; allowances to officers of the Officers Reserve Corps of the Army for uniforms and equipment; and pensions or allowances for injuries resulting from active service in the armed forces of any country. Physicians in service in the United States must file their return by March 15, 1943, but need not pay the tax until six months after the termination of service. There are three rules governing this extension of time of payment: (1) If the military or naval service began after October 17, 1940; (2) if it would be a hardship to pay the tax; and (3), if application for extension is made. The entire tax becomes payable six months after the termination of service, and cannot be paid in installments. Men serving outside the continental United States are not obligated to file a return as long as they remain outside of the country and continue to be a member of the armed forces.

Income of Decedents: A new rule has been passed in regard to the income of decedents. Since 1934 all accrued income up to the date of death was reportable in the year of death. This worked a hardship upon many persons, and the new rule provides that such amounts are not to be reported in the decedent's return, but instead are to be treated as income in the hands of the persons receiving them after the death. In other words, the estate of a physician pays income tax upon the accounts as they are collected, and not upon the entire sum which might have appeared on his books at the time of his death.

FEDERAL	STATE
Liability for filing return. All single persons with gross income of $500.00 or more for calendar year 1942; all married persons with gross income of $1,200.00 for same period.	Liability for filing return. All single persons with net income of $1,000.00 or more for 1942; all married persons with net income of $1,500.00 for same period; and all persons with a gross income of $3,000.00 or more.
Income. A physician's gross income is the total amount of money received by him during the year for professional services, regardless of when the services were rendered, plus money he has received as profits from investments and speculation, or as compensation and profits from other sources. Wages paid to doctors who are members of the armed forces are taxable.	Income. Gross income includes the money received by the physician for services rendered, plus such money as he may receive from investments and speculation and other sources. Money received for services rendered prior to 1934, however, is not taxable.
Joint returns are allowable.	Joint returns are allowable.

FEDERAL	STATE
Credit for dependents. $350.00 for each dependent.	Credit for dependents. $5.00 for each dependent (subtracted from tax).
Personal exemption—$500.00 for single person; $1,200.00 for head of family.	Personal exemption—$10.00 deduction from tax for single person; $20.00 deduction from tax for married couple.
Allowable Deductions	**Allowable Deductions**
Alimony and Separate Maintenance Payments. A new ruling now makes alimony and separate maintenance payments deductible from the income of the one paying them, and considers them as income for the recipient.	Alimony and Separate Maintenance Payments. Not deductible.
Automobile. When one automobile is used both professionally and socially, the doctor should estimate what percentage of the use is for professional service, and then charge that percentage of his automobile expense as an allowable deduction. Car for professional use only. Gasoline (minus tax). Oil, grease and repairs. Tires. Anti-freeze mix. Garage or parking lot rental. License fee—State. Chauffeur's wages. Miscellaneous. State gas tax, 3c per gallon. Federal auto tax—$7.09 for 1942. Automobile for family use. License fee.—State. State gas tax, 3c per gallon. Federal auto tax—$7.09 for 1942.	Automobile. Same as federal.
Business expenses. Attorney's fees (in defense of malpractice suit). Auditing. Bonuses. Collection of accounts. Fuel. Light. Moving to new business location. Rent. Repairing and maintenance of professional premises and equipment. Social Security tax on employees. Telephone and telegraph. Unemployment tax (if over eight employees). Utilities repairs. Wages. Water. Miscellaneous. When a doctor has an office in his residence, he must estimate what percentage of his rent and maintenance expense is chargeable to it and how much to residence.	Business expenses. Same as federal.

FEDERAL	STATE
Office supplies. (Amounts currently spent for books, furniture, professional instruments and equipment, the "useful life of which is less than one year" may be deducted.) Bank and check charges. Dressings. Drugs and chemicals. Instruments (not having lasting value). Medicines and supplies. Papers and magazines for waiting room. Postage. Professional journals. Stationery. Miscellaneous.	Office supplies. Same as federal.
Contributions. Charitable (Charity funds, community chests, hospitals, Red Cross, tuberculosis seals, war relief funds). Educational (cancer campaign, college endowments, etc.). Religious. Scientific. Contributions or assessments paid to chambers of commerce and professional associations and made for business purposes. Gifts required by your profession and given for business reasons.	Contributions. Same as federal.
Depreciation (To be determined by useful life of article). Automobile (professional). Furniture (office). Equipment (office).	Depreciation. Same as federal.
Insurance premiums. Automobile (proportionate to business use). Fire and theft on business property. Malpractice. Office or other professional equipment.	Insurance premiums. Same as federal.
Interest on indebtedness. On borrowed money. Owed on lien or mortgage note on home. Other notes.	Interest on indebtedness. Same as federal.
Losses. Fire, casualty and theft losses to the extent that they are not compensated for by insurance. Faulty driving (but not willful negligence). Damages, court costs and other expenses paid by you in connection with civil lawsuits concerning your profession.	Losses. Same as federal.
Medical Expense. Under a new ruling, medical expense in excess of 5 per cent of your income may be claimed as a deduction.	Medical expense. Not deductible.

FEDERAL	STATE
Miscellaneous. Legal expense paid by you for drawing contract of your employment. Miscellaneous or unusual expenses paid by you which were directly necessary to earn your income.	Miscellaneous. Same as federal.
Society dues. State Medical Society. County Medical Society. Other professional societies. Civic clubs.	Society dues. Same as federal.
Travel. Traveling expense to medical meetings and conventions is deductible, but the expense of attending postgraduate courses is not, nor is the expense of going to take an examination for certification by a special board.	Travel. Same as federal.
Taxes. Federal tax on admissions. Gasoline (3c per gallon). Narcotic license. General property taxes. Telephone and telegraph message taxes. Social Security and unemployment taxes paid on employees. State income tax for 1941. Iowa sales tax of 2 per cent. Federal tax on safety deposit box. Federal auto tax—$7.09 for 1942.	Taxes. Federal tax on admissions. Gasoline (3c per gallon). Narcotic license. General property taxes. Telephone and telegraph message taxes. Social Security and unemployment taxes paid on employees. Federal income tax for 1941. Sales tax of 2 per cent. Federal tax on safety deposit box. Federal auto tax—$7.09 for 1942.
Computation of tax. From gross income, subtract all authorized deductions to obtain net income figure. From net income subtract personal exemption and credit for dependents. The balance will be the surtax net income. Deduct from this figure interest on government obligations and the earned income credit. The normal tax will be six per cent of this last figure. The surtax will be determined by the amount of surtax net income, the rate depending upon the size of this figure. Complete instructions are to be found on each blank.	Computation of tax. Subtract allowable deductions from the gross income to obtain the net income figure. The tax rate is shown on the forms and is, briefly, 1 per cent on the first $1,000.00, 2 per cent on the second $1,000.00, etc. On incomes of $4,000.00 or more, 5 per cent tax is paid. From the tax as figured a deduction of $10.00 may be made for a single person, $20.00 for a married couple, and $5.00 for each dependent.

VICTORY TAX

The Revenue Act of 1942 provides for an additional tax on income for 1943 which is called the "victory tax". It does not apply to 1942 and has no effect on the tax return for 1942 which is due March 15, 1943. However, every individual must pay a tax of 5 per cent on his 1943 income in excess of $624.00 a year. Employers are required to withhold this tax from the salary of employees and report it quarterly as they now report social security taxes. This means that each physician must deduct 5 per cent of the salary of each employee in excess of $12.00 a week, and remit this quarterly as he now remits the social security taxes which he deducts.

Physicians who are not on a salary but dependent on income from services rendered will not pay the tax monthly during 1943. They must keep a record of their income, however, and make payment in 1944 on the basis of 5 per cent on all income in excess of $624.00 for the year 1943. It would obviously be difficult for physicians to determine their exact monthly income, and for that reason they will be allowed to pay on the basis of their yearly income the same as farmers, business firms, and other professional people.

HOSPITAL SERVICE, INC., OF IOWA INCREASES ITS HOSPITAL SERVICE

Hospital Service, Inc., of Iowa has voted the fourth increase in hospital services to its members in less than three years of operation. The Board of Directors, at its meeting October 27, 1942, voted to provide operating room service, anesthetic materials if supplied by the hospital, and casts, use of splints, and surgical dressings furnished to a subscriber or a family member who is not admitted as a bed patient to a total maximum sum of $10.00 for each admission.

This is intended to cover minor surgical cases in which it is not necessary that the patients be admitted as bed patients. The coverage is the same as that provided for patients admitted because of an accident, except that drugs and laboratory services will not be covered. Also, in this out-patient surgery classification one day will be counted against a patient's quota of 21. This is *not* the case in accident out-patient cases.

The Board felt that at this time when hospitals are so crowded and doctors so busy, and with future possibilities of even more demands, this might help to relieve an excessive demand for hospital beds.

It has also been announced by the Board of Directors that Mr. F. P. G. Lattner, executive director of the Hospital Service, Inc., of Iowa, has been granted a leave of absence for the duration and has been commissioned a lieutenant in the United States Naval Reserve. Mr. E. P. Lichty has been appointed acting executive director during Mr. Lattner's leave of absence. Mr. Lichty has been enrollment manager of the Blue Cross Plan. He was called here from the Associated Hospital Service of New York City when the Plan was organized.

AWARD OFFERED BY NATIONAL SOCIETY FOR THE PREVENTION OF BLINDNESS

The National Society for the Prevention of Blindness announces that a prize of $250.00 will be awarded for the most valuable original paper during 1943 adding to the existing knowledge about the diagnosis of early glaucoma. The award will be made by the Society with the guidance of an ophthalmologic committee composed of Dr. Arnold Knapp, Dr. Manuel Uribe Troncoso, and Dr. Mark J. Schoenberg.

Papers may be presented by any ophthalmologist, student in ophthalmology or research worker of the western hemisphere and may be written in English, French, German, Italian, Spanish or Portuguese. Those written in the last four languages, however, should be accompanied by a translation in English. Papers should be in the office of the National Society for the Prevention of Blindness, 1790 Broadway, New York City, by September 15, 1943.

AMERICAN COLLEGE OF PHYSICIANS CANCELS ANNUAL SESSION

The Board of Regents of the American College of Physicians has announced the cancellation of their 1943 Annual Session, which was scheduled to be held in Philadelphia, April 13 to 16, 1943. This action was taken after thoughtful consideration of all factors involved, including an intimation from the Secretary of War and the Office of Transportation that larger national medical groups should not plan meetings at the time set; a growing difficulty in getting speakers and clinicians of top rank to maintain the usual standards of the program; prospect of greatly reduced attendance, because civilian doctors are faced with too great a burden of teaching and practice already; a decreasing active membership, due to approximately 25 per cent of all doctors being called to active military service. President James E. Paullin announced, however, that all other activities of the College would be pursued with even greater zeal, and that the College would especially promote regional meetings over the country and organize postgraduate seminars in the various military hospitals for doctors in the armed forces.

SPECIAL LUNCHEONS AT ANNUAL MEETING

Any group desiring a special luncheon at the annual meeting, which is to be held in Des Moines April 29 and 30, is asked to make immediate arrangements with the central office.

Roster of Iowa Physicians in Military Service

As of January 22, 1943

Adair County

Cornell, D. D., Greenfield (Camp Murray, Wash.)..Capt., A.U.S.
Gantz, A. J., Greenfield (APO Los Angeles, Cal.)..Capt., A.U.S.

Adams County

Willett, W. J., Carbon (Camp Chaffee, Ark.).....1st Lt., A.U.S.

Allamakee County

Hogan, P. W., Waukon
Ivens, M. H., Waukon (Camp Shelby, La.)
Kiesau, M. F., Postville (Fort Leonard Wood, Mo.)
Rominger, C. W., Waukon

Appanoose County

Edwards, R. E., Centerville (Fort Dix, N. J.)..1st Lt., A.U.S.
Huston, M. D., Centerville (Lowry Field, Colo.)....Capt., A.U.S.

Audubon County

Koehne, F. D., Audubon (Oroville, Wash.)

Benton County

Koontz, L. W., Vinton.....Capt., A.U.S.
Senfeld, Sidney, Belle Plaine

Black Hawk County

Bickley, D. W., Waterloo (Camp Barkeley, Texas) 1st Lt., A.U.S.
Bickley, J. W., Waterloo (Fort Sill. Okla.).....1st Lt., A.U.S.
Butts, J. H., Waterloo (Memphis, Tenn.)...Lt. Cmdr., U.S.N.R.
Cooper, C. N., Waterloo (Seattle, Wash.)...Lt. Cmdr., U.S.N.R.
Ellyson, C. D., Waterloo (Norfolk, Va.).....Lt. (jg) U.S.N.R.
Hartman, H. J., Waterloo (Fort Lewis, Wash.)..Capt., A.U.S.
Henderson, L. J., Cedar Falls (Fort Ord, Cal.)..Capt., A.U.S.
Hoyt, C. N., Cedar Falls (McClellan Field, Ala.).1st Lt., A.U.S.
Ludwick, A. L., Waterloo (APO New York, N. Y.).Capt., A.U.S.
O'Keefe, P. T., Waterloo (Camp Blanding, Fla.)..Capt., A.U.S.
Paige, R. T., LaPorte City (Des Moines, Ia.).Lt. Cmdr., U.S.N.R.
Rohlf, E. L., Jr., Waterloo (APO New York, N. Y.) .....1st. Lt., A.U.S.
Seibert, C. W., Waterloo (Fort Wright, Wash.) Capt., A.U.S.
Smith, E. E., Waterloo (Scott Field, Ill.).....Major, A.U.S.
Smith, R. I., Waterloo (Reno, Nevada).....1st Lt., A.U.S.
Smith, R. G., Cedar Falls (APO New York, N. Y.).Capt., A.U.S.
Trunnell, T. L., Waterloo (care P.M., New York, N. Y.) .....Lt. (jg), U.S.N.R.

Boone County

Brewster, E. S., Boone (Camp Chaffee, Ark.)....Major, A.U.S.
Healy, M. D., Boone
Shane, R. S., Pilot Mound (Des Moines, Ia.) Lt. Col., A.U.S.

Bremer County

Amlie, P. J., Tripoli (Des Moines, Ia.)
Rathe, H. W., Waverly (Fort Jackson, S. C.).....Capt., A.U.S.

Buchanan County

Barton, J. C., Independence (Omaha, Neb.).....Capt., A.U.S.
Leehey, P. J., Independence (APO San Francisco, Cal.) .....Capt., A.U.S.
Loeck, J. F., Aurora (Camp Hood, Texas).....Capt., A.U.S.

Buena Vista County

Almquist, R. E., Albert City (Camp Shelby, Miss.).Capt., A.U.S.
Brecher, P. W., Storm Lake (Camp White, Ore.) Major, A.U.S.
Mailliard, R. E., Storm Lake (Watertown, N. Y.) Major, A.U.S.
Shope, C. D., Storm Lake (Fort Des Moines, Ia.) 1st Lt., A.U.S.
Witte, H. J., Storm Lake (Fort Robinson, Neb.)..Capt., A.U.S.

Butler County

Anderson, B. V., Greene (Kansas City, Mo.)
James, R. O., Allison (Mare Island, Cal.)
Rolfs, F. O., Parkersburg (Springfield, Mo.)

Calhoun County

Faust, J. H., Manson (San Diego, Cal.)....Lt. Cmdr., U.S.N.R.
Grinley, A. V., Rockwell City (APO New York, N. Y.) .....1st Lt., A.U.S.
Hobart, F. W., Lake City (Camp Grant, Ill.)....Capt., A.U.S.
Peek, L. H., Lake City (Jefferson Barracks, Mo.)..Capt., A.U.S.
Stevenson, W. W., Rockwell City (San Francisco, Cal.) .....Lt. Cmdr., U.S.N.R.
Weyer, J. J., Lohrville (Camp Carson, Colo.)....1st Lt., A.U.S.

Carroll County

Anneberg, A. R., Carroll (Camp Barkeley, Texas)
Anneberg, W. A., Carroll
Cochran, J. L., Carroll (Gulfport, Miss.)
Cross, D. L., Coon Rapids.....Lt., U.S.N.R.
Freedland, Maurice, Coon Rapids
Morrison, J. R., Carroll (Camp Maxey, Texas)
Morrison, R. B., Carroll (Muroc, California)....1st. Lt., A.U.S.
Pascoe, P. L., Carroll (Bowman Field, Ky.)
Scannell, R. C., Carroll (APO, New York, N. Y.)
Tindall, R. N., Coon Rapids
Wyatt, M. R., Manning (Carlisle Barracks, Penn.)

Cass County

Egbert, D. S., Atlantic (Fort Snelling, Minn.) Major, A.U.S.
Longstreth, C. M., Atlantic (Norman, Okla).Lt. Cmdr., U.S.N.R.
Needles, R. M., Atlantic (Camp Polk, La.)....1st Lt., A.U.S.
Petersen, M. T., Atlantic (Camp Barkeley, Texas)..Capt., A.U.S.

Cedar County

Mosher, M. L., West Branch (Camp Chaffee, Ark.) .....1st Lt., A.U.S.
O'Neal, H. E., Tipton (Pine Camp, N. Y.).....Major, A.U.S.

Cerro Gordo County

Adams, C. O., Mason City (Brigham City, Utah)
Egloff, W. C., Mason City (Balboa Island, Cal.)
Flickinger, R. R., Mason City (Carlisle Barracks, Penn.) .....1st. Lt., A.U.S.
Hale, A. E., Mason City (Camp Hale, Colo.)
Harris, R. H., Mason City (Columbus, Ohio)
Harrison, G. E., Mason City (Boston, Mass.).....Col., A.U.S.
Houlahan, J. E., Mason City (Sacramento, Cal.)
Lannon, J. W., Clear Lake (Carlisle Barracks, Penn.)
Long, D. L., Mason City (Santa Ana, Cal.)
Marinos, H. G., Mason City (APO San Francisco, Cal.)
Sternhill, Irving, Mason City (APO New York, N. Y.)

Cherokee County

Bullock, G. D., Washta (Camp Livingston, La.)....Capt., A.U.S.
Ihle, C. W., Jr., Cleghorn (Fort Leonard Wood, Mo.) .....Capt., A.U.S.
Noble, R. P., Cherokee (Ephrata, Wash.) .....Capt., A.U.S.
Swift, C. H., Jr., Marcus (Fort Bliss, Texas)....Capt., A.U.S.

Chickasaw County

Caulfield, J. D., New Hampton (Denver, Colo.)....Capt., A.U.S.
Murphey, A. L., Fredericksburg (APO New Orleans, La.) .....Capt., A.U.S.
O'Connor, E. C., New Hampton (Camp Crowder, Mo.) .....Capt., A.U.S.
Richmond, P. C., New Hampton (Camp Gruber, Okla.) .....Capt. A.U.S.

Clay County

Adams, G. W., Royal (Fort Clayton, Panama Canal Zone)
Edington, F. D., Spencer (Lowry Field, Colo.)..Lt. Col., A.U.S.
Jones, C. C., Spencer (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
King, D. H., Spencer (Spokane, Wash.).....Capt., A.U.S.

Clayton County

Anderson, H. M., Strawberry Point (Camp Crowder, Mo.) .....1st Lt., A.U.S.
Rhomberg, E. B., Guttenberg (Camp Wallace, Texas).Capt.,A.U.S.

Clinton County

Ellison, G. M., Clinton (Blessing, Texas)
Hill, D. E., Clinton
King, R. C., Clinton (Camp Chaffee, Ark.)
Meyer, A. K., Clinton (Denver, Colo.)
Norment, J. E., Clinton (Mare Island, Cal.)
Riedesel, E. V., Wheatland (Fort Douglas, Utah)
Snyder, D. C., De Witt
Van Epps, E. F., Clinton
Waggoner, C. V., Clinton (Seattle, Wash.)..Lt. Cmdr., U.S.N.R.

Crawford County

Fee, C. H., Denison (Bowman Field, Ky.)
Maire, E. J., Vail (San Francisco, Cal.)
Wetrich, M. F., Manilla

Dallas-Guthrie Counties

Fail, C. S., Adel (Farragut Air Base, Idaho).....U.S.N.R.
Margolin, J. M., Perry (Camp Chaffee, Ark.).....A.U.S.
Nicoll, C. A., Panora (Camp Barkeley, Texas)..Capt., A.U.S.
Osborn, C. R., Dexter (San Francisco, Cal.)....Lt. (jg), U.S.N.R.
Todd, D. W., Guthrie Center (Camp Barkeley, Texas) .....1st. Lt., A.U.S.
Wilke, F.A., Woodward (APO New York, N. Y.)

Decatur County

Doss, W. N., Leon (APO San Francisco, Cal.)
Gamet, E. E., Lamoni (Tacoma, Wash.)

Delaware County

Baumgarten, Oscar, Earlville (APO Los Angeles, Cal.)
Clark, R. E., Manchester (Fort Riley, Kan.)....1st Lt., A.U.S.

Des Moines County

Eigenfeld, M. L., Burlington (Camp Robinson, Ark.) .....1st. Lt., A.U.S.
Heitzman, P. O., Burlington (Fort Leonard Wood, Mo.)
Jenkins, G. D., Burlington (West Point, N. Y.)....Lt. Col. A.U.S.
Lohmann, C. J., Burlington (Fort Lewis, Wash.)
McKitterick, J. C., Burlington (Davisville, R. I.)
Moerke, R. F., Burlington (Abilene, Texas)

Dickinson County

Buchanan, J. J., Milford (Great Lakes, Ill.).Lt. Cmdr., U.S.N.R.
Henning, G. G., Milford (Camp Pickett, Va.).....Capt., A.U.S.
Nicholson, C. G., Spirit Lake (Sawtelle, Cal.).....Capt., A.U.S.
Rodawig, D. F., Spirit Lake (Fort Hancock, N. J.) .....Capt., A.U.S.

Dubuque County

Beddoes, M. G., Cascade (Kansas City, Mo.)....Capt., A.U.S.
Conzett, D. C., Dubuque (Fort Riley, Kan.)....Major, A.U.S.
Cunningham, J. C., Dubuque (Meridian, Miss.) Capt., A.U.S.
Edstrom, Henry, Dubuque (Denver, Colo.).....Major, A.U.S.

Entringer, A. J., Dubuque (APO San Francisco, Cal.) ..... Capt., A.U.S.
Hall, C. B., Dubuque (San Antonio, Texas) ..... 1st Lt., A.U.S.
Knoll, A. H., Dubuque (San Francisco, Cal.) .... Major, A.U.S.
Langford, W. R., Epworth (Rapid City, S. Dak.) .. Capt., A.U.S.
Lavery, H. B., Dubuque (Washington, D. C.) .... Lt. Col., A.U.S.
Leik, D. W., Dubuque (Las Vegas, Nevada) .... 1st Lt., A.U.S.
Mueller, J. J., Dubuque (Hattiesburg, Miss.) .... 1st Lt., A.U.S.
Olson, P. F., Dubuque (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Painter, R. C., Dubuque (care PM, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Paulus, J. W., Dubuque (Camp Merced, Cal.) .... 1st Lt., A.U.S.
Plankers, A. G., Dubuque (APO New York, N. Y.) Major, A.U.S.
Quinn, F. P., Dubuque (El Paso, Texas) ..... Major, A.U.S.
Scharle, Theodore, Dubuque (Fort Lawton, Wash.) Capt., A.U.S.
Schueller, C. J., Dubuque (Camp Barkeley, Texas) 1st Lt., A.U.S.
Sharpe, D. C., Dubuque (Fort Leonard Wood, Mo.) .. Capt., A.U.S.
Smith, C. W., Dubuque (care PM, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Steffens, L. F., Dubuque (Fort Smith, Ark.) ..... Major, A.U.S.
Straub, J. J., Dubuque (care PM, San Francisco, Cal.) ..... Lt., U.S.N.R.
Ward, D. F., Dubuque (Piedmont, Cal.) .... Lt. Cmdr., U.S.N.R.

Emmet County

Clark, J. P., Estherville (Fort Sam Houston, Texas) ..... Capt., A.U.S.
Miller, O. H., Estherville (Gowen Field, Idaho) ..... Lt. Cmdr., U.S.N.R.

Fayette County

Belding, Leland, Waucoma
Camp, D. E., West Union (Camp Blanding, Fla.) ... Capt., A.U.S.
Gallagher, J. P., Oelwein (San Diego, Cal.)
Henderson, W. B., Oelwein (Jefferson Barracks, Mo.)
Hess, A. M., West Union (Randolph Field, Texas) ..... 1st Lt., A.U.S.
Moen, H. P., West Union (Denver, Colo.)
Sulzbach, John, Oelwein

Floyd County

Baltzell, W. C., Charles City (Camp McCoy, Wis.) .. Capt., A.U.S.
Flater, N. C., Floyd (Rockford, Ill.) ..... Capt., A.U.S.
Knight, R. A., Rockford (San Diego, Cal.) ..... Lt., U.S.N.R.
Mackie, D. G., Charles City (Topeka, Kan.) .... 1st Lt., A.U.S.
Miner, J. B., Jr., Charles City (San Francisco, Cal.) Lt., U.S.N.R.
Tolliver, H. A., Charles City (Fort Cronkhide, Cal.) Capt., A.U.S.

Franklin County

Byers, W. L., Sheffield (Jefferson Barracks, Mo.) 1st Lt., A.U.S.
Hedgecock, L. E., Hampton (care PM, San Francisco, Cal.) ..... Lt., U.S.N.R.
Randall, W. L., Hampton (Great Lakes, Ill.) ..... Lt., U.S.N.R.
Walton, S. G., Hampton (Camp Robinson, Ark.) 1st Lt., A.U.S.

Fremont County

Kerr, W. H., Hamburg (Camp Phillips, Kan.) .... Capt., A.U.S.
Marrs, W. D., Tabor (APO, New York, N. Y.) .. 1st Lt., A.U.S.
Wanamaker, A. R., Hamburg (Los Angeles, Cal.) .. Capt., A.U.S.

Greene County

Cartwright, F. P., Grand Junction (Casper, Wyo.) Capt., A.U.S.
Castles, W. A., Jr., Rippey (APO San Francisco, Cal.) ..... Capt. A.U.S.
Hanson, L. C., Jefferson (Camp Rucker, Ala.) ... 1st Lt., A.U.S.
Jongewaard, A. J., Jefferson (St. Louis, Mo.) ..... U.S.N.R.
Limberg, J. I., Jr., Jefferson (APO San Francisco, Cal.) ..... Capt., A.U.S.
Lohr, P. E., Churdan (San Diego, Cal.) ..... A.U.S.

Grundy County

Rose, J. E., Grundy Center (Norman, Okla.) Lt. Cmdr., U.S.N.R.

Hamilton County

Buxton, O. C., Webster City (March Field, Cal.) .. 1st Lt., A.U.S.
Howar, B. F., Jewell (APO New York, N. Y.) ..... Capt., A.U.S.
James, D. W., Kamrar (Camp Livingston, La.) .... Capt., A.U.S.
Lewis, W. B., Webster City (Camp Young, Cal.) .. Capt., A.U.S.
Mooney, F. P. Jewell (APO New York, N. Y.)
Paschal, G. A., Williams (Camp Barkeley, Texas) .. Capt., A.U.S.
Patterson, R. A., Webster City (San Diego, Cal.) ..... Lt. Cmdr., U.S.N.R.
Ptacek, J. L., Webster City (Sheppard Field, Texas)
Thompson, E. D., Webster City (Biloxi, Miss.) .. Capt., A.U.S.

Hancock-Winnebago Counties

Dolmage, G. H., Buffalo Center (Camp Robinson, Ark.) ... A.U.S.
Dulmes, A. H., Klemme (Camp Lewis, Wash.) ..... Capt., A.U.S.
Eller, L. W., Kanawha (Fort Leonard Wood, Mo.) ..... A.U.S.
Shaw, D. F., Britt (Long Beach, Cal.)
Thomas, C. W., Forest City (Camp Crowder, Mo.) .. Capt., A.U.S.

Hardin County

Houlihan, F. W., Ackley (Iowa City, Iowa) ..... U.S.N.R.
Jansonius, J. W., Eldora (Vancouver, Wash.) ..... A.U.S.
Johnson, R. J., Iowa Falls (Fort Bliss, Texas) .. Capt., A.U.S.
Johnson, W. A., Alden (Pendleton, Ore.)
Shurts, J. J., Eldora (Camp Roberts, Cal.) ..... 1st Lt., A.U.S.
Todd, V. S., Eldora (Abilene, Texas)

Harrison County

Bergstrom, A. C., Missouri Valley (Camp Rohinson, Ark.)
Byrnes, C. W., Dunlap (Jefferson Barracks, Mo.)
Heise, C. A., Jr., Missouri Valley
Tamisiea, F. X., Missouri Valley (Jefferson Barracks, Mo.) ..... 1st Lt., A.U.S.

Henry County

Brown, W. B., Mount Pleasant (Ft. Devens, Mass.) . Capt., A.U.S.
Gloeckler, B. B., Mount Pleasant (Fort Myers, Fla.) Capt., A.U.S.
Hartley, B. D., Mount Pleasant (Yuma, Ariz.) .... Capt., A.U.S.
Megorden, W. H., Mount Pleasant (Ogden, Utah) 1st Lt., A.U.S.
Ristine, L. P., Mount Pleasant (Sioux Falls, S. Dak.) ..... Major, A.U.S.

Howard County

Buresh, Abner, Lime Springs (San Diego, Cal.)
Nierling, P. A., Cresco (Camp Polk, La.) ..... 1st Lt., A.U.S.

Humboldt County

Arent, A. S., Humboldt (Stockton, Cal.) ..... 1st Lt., A.U.S.
Coddington, J. H., Humboldt (Fresno, Cal.) ..... 1st Lt., A.U.S.

Ida County

Dressler, J. B., Ida Grove (Omaha, Neb.) ..... 1st Lt., A.U.S.
Harris, H. H., Battle Creek (Omaha, Neb.) .... 1st Lt., A.U.S.
Martin, J. W., Holstein (Montgomery, Ala.) ..... Capt., A.U.S.

Iowa County

McDaniel, J. D., Marengo (Fort Clark, Texas) ..... A.U.S.
Miller, D. F., Williamsburg (Farragut Air Base, Idaho) ..... Lt. (jg), U.S.N.R.

Jackson County

Swift, F. J., Jr., Maquoketa (Fort Bragg, N. C.) .. Major, A.U.S.

Jasper County

Doake, Clarke, Newton ..... 1st Lt., A.U.S.
Minkel, R. M., Newton (APO New York, N. Y.) 1st Lt., A.U.S.
Ritchey, S. J., Newton ..... Major, A.U.S.

Jefferson County

Castell, J. W., Fairfield (APO New York, N. Y.) Capt., A.U.S.
Gittler, Ludwig, Fairfield (APO New York, N. Y.) . Major, A.U.S.
Graber H. E., Fairfield (Carlisle Barracks, Penn.) Major, A.U.S.
James, L. D., Fairfield (Camp Dodge, Iowa) .... Lt. Col., A.U.S.
Taylor, I. C., Fairfield (Washington, D. C.) .... 1st Lt., A.U.S.

Johnson County

Agnew, J. W., Iowa City (Camp Phillips, Kan.) .. 1st Lt., A.U.S.
Allen, J. H., Iowa City (Scott Field, Ill.) ..... Capt., A.U.S.
Boiler, W. F., Iowa City (Fort Leonard Wood, Mo.) ..... Major, A.U.S.
Boyd, E. J., Iowa City (Camp Blanding, Fla.) .. 1st Lt., A.U.S.
Brinkhous, K. M., Iowa City (Fort Sam Houston, Texas) ..... Major, A.U.S.
Callahan, G. D., Iowa City (San Diego, Cal.) ..... Lt., U.S.N.R.
Cooper, W. K., Iowa City (Jefferson Barracks, Mo.) Capt., A.U.S.
Crowell, E. A., Iowa City (Spokane, Wash.) .. 1st Lt., A.U.S.
Diddle, A. W., Iowa City (Key West, Fla.) .. Lt. (jg), U.S.N.R.
Dorner, R. A., Iowa City (APO New York, N. Y.) . 1st Lt., A.U.S.
Elmquist, H. S., Iowa City (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Emmons, M. B., Iowa City (Fort Sam Houston, Texas) ..... 1st Lt., A.U.S.
Flynn, J. E., Iowa City (Hot Springs, Ark.) ..... A.U.S.
Fourt, A. S., Iowa City (APO New York, N. Y.) .. Col., A.U.S.
Francis, N. L., Iowa City (Annapolis, Md.) Lt. (jg), U.S.N.R.
Galinsky, L. J., Oakdale (Fort Logan, Colo.) ..... A.U.S.
Garlinghouse, R. O., Iowa City (Fort Snelling, Minn.) .. A.U.S.
Hardin, R C., Iowa City (APO New York, N. Y.) ..... A.U.S.
Harris, K. S., Iowa City (Camp Crowder, Mo.) ..... A.U.S.
Hartung, Walter, Iowa City (Fort Des Moines, Iowa) .. A.U.S.
Irwin, R. L., Iowa City (Iowa City, Iowa) .. Lt. Cmdr., U.S.N.R.
January, L. E., Iowa City (Davis Field, Ariz.) ..... A.U.S.
Keisler, H. D., Iowa City (Camp Barkeley, Tex.) .. 1st Lt., A.U.S.
Lage, R. H., Iowa City (San Diego, Cal.) .... Lt. (jg), U.S.N.R.
Longwell, F. H., Iowa City (APO New York, N. Y.) . Capt., A.U.S.
Nagyfy, S. F., Iowa City (Memphis, Tenn.) ... Lt. (jg), U.S.N.R.
Newman, R. W., Iowa City (Ocean View, Va.) ..... A.U.S.
Paulus, E. W., Iowa City (APO New York, N. Y.) ..... A.U.S.
Petersen, V. W., Iowa City (APO New York, N. Y.) ..... Major, A.U.S.
Sells, R. L., Jr., Iowa City (Hamilton Field, Cal.) . 1st Lt., A.U.S.
Smith, H. F., Iowa City (Great Lakes, Ill.) .. Lt. Cmdr., U.S.N.R.
Springer, E. W., Iowa City (APO San Francisco, Cal.) ..... 1st. Lt., A.U.S.
Stadler, H. E., Iowa City (Fort Harrison, Ind.) .. 1st Lt., A.U.S.
Staggs, W. A., Iowa City (Camp Robinson, Ark.) .. 1st Lt., A.U.S.
Stephens, R. L., Iowa City (Miami Beach, Fla.) Capt., A.U.S.
Stump, R. B., Iowa City (Fort Leonard Wood, Mo.) .. A.U.S.
Titus, E. L., Iowa City (Fort Wright, N. Y.) .... Col., A.U.S.
Vest, W. M., Iowa City (Fort Ord, Cal.) ..... Capt., A.U.S.
Ziffren, S. E., Iowa City (Springfield, Mo.) .... 1st. Lt., A.U.S.

Junior Members

Adams, M. P., Iowa City
Ahrens, J. H., Iowa City (APO San Francisco, Cal.) ..... A.U.S.
Ball, A. L., Iowa City (Camp Polk, La.) ..... Major, A.U.S.
Barrent, M. E., Iowa City (Camp Tyson, Tenn.) .. Capt., A.U.S.
Black, N. M., Iowa City (McChord Field, Wash.) 1st Lt., A.U.S.
Blair, J. D., Iowa City (APO San Francisco, Cal.) . Major, A.U.S.
Brintnall, E. S., Iowa City (Colorado Springs, Colo.) ..... 1st Lt., A.U.S.
Burr, S. P., Iowa City (APO San Francisco, Cal.) . 1st Lt., A.U.S.
Connole J. F., Iowa City (Camp Bowie, Texas) .. 1st Lt., A.U.S.
Couch, O. A., Iowa City (Camp Van Dorn, Miss.) .. 1st Lt., A.U.S.
Decker, C. E., Iowa City (Oklahoma City, Okla.) .. 1st Lt., A.U.S.
Donnelly B. A., Iowa City (APO San Francisco, Cal.) ..... 1st Lt., A.U.S.
Ehrenhaft, J. L., Iowa City (March Field, Cal.) .. 1st Lt., A.U.S.
Englerth, F. L., Iowa City (APO San Francisco, Cal.) ..... Capt., A.U.S.
Freiberg, M., Iowa City (Jefferson Barracks, Mo.) ..... A.U.S.
Glassman A. L., Iowa City (Palm Springs, Cal.) 1st Lt., A.U.S.

Gilliland, C. H., Iowa City (Great Lakes, Ill.) Lt. (jg), U.S.N.R.
Hamilton, H. E., Iowa City (Chicago, Ill.).....1st Lt., A.U.S.
Harms, G. E., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Ide, L. W., Iowa City (Fort Warren, Wyo.).....1st Lt., A.U.S.
Jacobs, C. A., Iowa City (APO New York, N. Y.).Major, A.U.S.
Keil, P. G., Iowa City (Sioux City, Iowa).....1st Lt., A.U.S.
Kelberg, M. R., Iowa City (Treasure Island, Cal.).....Lt. (jg), U.S.N.R
Keleher, M. F., Iowa City (Great Lakes, Ill.)..Lt. (jg), U.S.N.R.
Keohen, G. F., Iowa City (Camp Grant, Ill.)....Capt., A.U.S.
Kugler, F. E., Iowa City (Fort Warren, Wyo.)....Capt., A.U.S.
Lowry, F. C., Iowa City (Sioux Falls, S. D.)....1st Lt., A.U.S.
McCann, J. P., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
McQuiston, W. O., Iowa City (Chicago, Ill.)....1st Lt., A.U.S.
Moen, B. H., Iowa City
Moon, R. E., Iowa City (Camp Bowie, Texas)....1st Lt., A.U.S.
Phillips, R. M., Iowa City (San Francisco, Cal.) 1st Lt., A.U.S.
Pulliam, R. L., Iowa City
Randall, C. G., Iowa City
Randall, R. G., Iowa City (Waterloo, Iowa).....Capt. A.U.S.
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.).....1st Lt., A.U.S.
Russin, L. A., Iowa City (Fort Blanding, Fla.)....Capt., A.U.S.
Saar, J. L., Iowa City (APO New York, N. Y.)..Capt., A.U.S.
Sawtelle, W. W., Iowa City
Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Shand, J. A., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Shapiro, S. I., Iowa City
Simpson, F. E., Iowa City (Camp Grant, Ill.).....A.U.S.
Skewis, J. E., Iowa City (Rochester, N. Y.)..Lt. (jg), U.S.N.R.
Skouge, O. T., Iowa City
Towle, R. A., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Warren, R. F., Iowa City (Santa Barbara, Cal.).....A.U.S.
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.).....1st. Lt., A.U.S.
Wicks, W. J., Iowa City (Camp Crowder, Mo.)....Capt., A.U.S.
Williams, L. A., Iowa City (Treasure Island, Cal.).1st Lt., A.U.S.
Willumsen, H. C., Iowa City (Chico, Cal.).....Capt., A.U.S.
Wolkin, J., Iowa City (San Antonio, Texas)....Capt., A.U.S.
Yetter, W. L., Iowa City (APO New York, N. Y.) Capt., A.U.S.
Zahrt, N. E., Iowa City (Miami Beach, Fla.)....1st Lt., A.U.S.
Zimmerman, H. A., Iowa City (Santa Ana, Cal.)..1st Lt., A.U.S.

Keokuk County

Bjork, Floyd, Keota (Camp Barkeley, Texas).....A.U.S.
Doyle, J. L., Sigourney (Camp Barkeley, Texas).....A.U.S.
Engelmann, A. T., What Cheer (Camp Polk, La.) Capt., A.U.S.
Graham, J. A., Gibson (Needles, Cal.).....1st. Lt., A.U.S.
Montgomery, G. E., Keota (Fort Sam Houston, Texas)....A.U.S.
Wiley, Dudley, Hedrick (Mason City, Wash.)

Kossuth County

Clapsaddle, D. W., Burt (Durham, N. C.).....1st Lt., A.U.S.
Williams, R. L., Lakota (San Diego, Cal.)..Lt. Cmdr., U.S.N.R.

Lee County

Ashline, G. H., Keokuk (Camp Young, Cal.)
Cleary, H. G., Fort Madison (Parsons, Kan.)
Cooper, R. E., Keokuk (Fort Leonard Wood, Mo.)
Johnstone, A. A., Keokuk (Camp Robinson, Ark.)
McKee, T. L., Keokuk (APO San Francisco, Cal.)..Major, A.U.S.
Pumphrey, L. C., Keokuk (Fort Leavenworth, Kan.)
Rankin, J. R., Keokuk (APO San Francisco, Cal.)
Steffey, F. L., Keokuk (Fort Snelling, Minn.)
Van Werden, B. D., Keokuk (Fort Jackson, S. C.)..Capt., A.U.S.

Linn County

Andre, G. R., Lisbon (Camp Barkeley, Texas)....Major, A.U.S.
Berney, P. W., Cedar Rapids (San Francisco, Cal.) Capt., A.U.S.
Challed, D. S., Cedar Rapids (Fort Ord, Cal.)....1st Lt., A.U.S.
Chapman, R. M., Cedar Rapids (Chicago, Ill.)..1st Lt., A.U.S.
Coughlan, V. H., Cedar Rapids (Fort Snelling, Minn.)
Courter, W. O., Cedar Rapids (Fort Warren, Wyo.).Capt., A.U.S.
Crew, P. I., Marion (Monroe, La.).....Capt., A.U.S.
Dunn, F. C., Cedar Rapids (Pocatello, Idaho)....Capt., A.U.S.
Halpin, L. J., Cedar Rapids (Atlanta, Ga.)....Major, A.U.S.
Hecker J. T., Cedar Rapids (Pecos, Texas).....1st Lt., A.U.S.
Jirsa, H. O., Cedar Rapids (APO New York, N. Y.) Capt., A.U.S.
Keith, J. J., Marion (APO San Francisco, Cal.)..Capt., A.U.S.
Kieck, E. G., Cedar Rapids (San Diego, Cal.) Lt. Cmdr., U.S.N.R.
Kruckenberg, W. G., Mount Vernon (San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Locher, R. C., Cedar Rapids (Brownsville, Texas)..Capt., A.U.S.
MacDougal, R. F., Cedar Rapids (Salina, Kan.)....Capt., A.U.S.
McConkie, E. B., Cedar Rapids (Sioux Falls, S. Dak.).....Major, A.U.S.
McQuiston, J. S., Cedar Rapids (Salina, Kan.)..Major, A.U.S.
Netolicky, R. Y., Cedar Rapids (San Francisco, Cal.).Lt., U.S.N.R.
Noe, C. A., Cedar Rapids (Hot Springs, Ark.)..Major, A.U.S.
Parke, John, Cedar Rapids (APO New York, N. Y.) Capt., A.U.S.
Proctor, R. D., Cedar Rapids (Corpus Christi, Texas).....Lt. Cmdr., U.S.N.R.
Redmond, J. J., Cedar Rapids (APO New York, N. Y.).....Capt., A.U.S.
Rieniets, J. H., Cedar Rapids (Great Lakes, Ill.).....Lt. Cmdr., U.S.N.R.
Sedlacek, L. B., Cedar Rapids (Camp Screven, Ga.) Major, A.U.S.
Smrha, J. A., Cedar Rapids (Camp Davis, N. C.)..1st Lt., A.U.S.
Stark, C. H., Cedar Rapids (Pendleton Field, Ore.).Capt., A.U.S.
Sulek, A. E., Cedar Rapids (APO San Francisco, Cal.).....Major, A.U.S.
Woodhouse, K. W., Cedar Rapids (APO New York, N. Y.).....Major, A.U.S.
Wray, R. M., Cedar Rapids (APO San Francisco, Cal.).....Capt., A.U.S.
Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.

Louisa County

DeYarman, K. T., Morning Sun (San Antonio, Texas).....1st Lt., A.U.S.

Lucas County

Lister, K. E., Chariton (Fort Snelling, Minn.)

Lyon County

Cook, S. H., Rock Rapids (Carlisle Barracks, Penn.).....Capt., A.U.S.
Corcoran, T. E., Rock Rapids (APO New York, N. Y.).....Capt. A.U.S.
De Young, G. M., George (Camp Barkeley, Texas)..Capt., A.U.S.
Moriarty, J. F., Rock Rapids (Fort Leonard Wood, Mo.).....1st Lt., A.U.S.

Madison County

Boden, H. N., Truro (Fresno, Cal.)
Chesnut, P. F., Winterset (Fort Lewis, Wash.)....1st Lt., A.U.S.
Wicks, R. F., Winterset (Portland, Ore.)
Veltman, J. F., Winterset (St. Louis, Mo.).....Capt., A.U.S.

Mahaska County

Bennett, G. W., Oskaloosa (Fort Riley, Kan.)..Major, A.U.S.
Clark, G. H., Oskaloosa.....Lt. Cmdr., U.S.N.R.
Lemon, K.M., Oskaloosa.....1st Lt., A.U.S.

Marion County

Elliott, V. J., Knoxville (San Diego, Cal.).....Capt., A.U.S.
Mater, D. W., Knoxville (Lincoln, Neb.).....Capt., A.U.S
Ralston, F. P., Knoxville (Indio, Cal.).....Capt., A.U.S.
Schiek, C. M., Knoxville.....Lt. Cmdr., U.S.N.R.
Schroeder, M. C., Pella (Camp Uhlan, Texas)....1st Lt., A.U.S.
Williams, D. B., Knoxville.....Capt. A.U.S.

Marshall County

Carpenter, R. C., Marshalltown (APO New York, N. Y.).....Capt., A.U.S.
Marble, E. J., Marshalltown (San Diego, Cal.)....Lt., U.S.N.R.
Marble, W. P., Marshalltown (Walla Walla, Wash.) Capt., A.U.S.
Meyer, M. G., Marshalltown (Camp Polk, La.)....Capt., A.U.S.
Noonan, J. J., Marshalltown (San Diego, Cal.)..Major, A.U.S.
Phelps, R. E., State Center (Camp Baker, Cal.)..1st Lt., A.U.S.
Sinning, J. J., Melbourne (Camp Robinson, Ark.)..Capt., A.U.S.
Smith, E. M., State Center (Gowen Field, Idaho)..Major, A.U.S.
Stegman, J. J., Marshalltown (Portland, Ore.)..Capt., A.U.S.
Wells, R. C., Marshalltown (Gowen Field, Idaho) 1st Lt., A.U.S.
Wolfe, O. D., Marshalltown (Fort Riley, Kan.)..Capt., A.U.S.
Wolfe, R. M., Marshalltown (Pensacola, Fla.).Lt. (jg), U.S.N.R.

Mills County

DeYoung, W. A., Glenwood (Camp Crowder, Mo.)..Capt., A.U.S.
Magaret, E. C., Glenwood (Lubbock, Texas)....1st Lt., A.U.S.
Shonka, T. E., Malvern (Baltimore, Md.).....1st Lt., A.U.S.

Mitchell County

Culbertson, R. A., St. Ansgar (Camp White, Ore.) Major, A.U.S.
Moore, E. E. (Camp Pickett, Virginia).....Major, A.U.S.
Owen, William (San Diego, Cal.).....Lt. (jg), U.S.N.R.
Walker, T. G., Riceville (Minneapolis, Minn.).....Lt., U.S.N.R.

Monona County

Almer, L. E., Moorehead (Fort Knox, Ky.)
Gaukel, L. A., Onawa (APO Seattle, Wash.)....1st Lt., A.U.S.
Harlan, M. E., Onawa (care PM, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Stauch, M. O., Whiting (Fort Rosecrans, Cal.).....A.U.S.
Wainwright, M. T., Mapleton (Camp Barkeley, Texas)...A.U.S.
Wolpert, P. L., Onawa (Denver, Colo.).....Capt., A.U.S.

Monroe County

Richter, H. A., Albia (Waco, Texas).....Capt., A.U.S.
Smith, R. A., Albia (San Antonio, Texas).....1st Lt., A.U.S.

Montgomery County

Bastron, H. C., Red Oak (APO New York, N. Y.)..Major, A.U.S.
Hansen, F. A., Red Oak (San Diego, Cal.).....Lt., U.S.N.R.
Moriarty, L. R., Villisca (APO Seattle, Wash.)....Capt., A.U.S.
Sorensen, E. M., Red Oak (Jefferson Barracks, Mo.).....1st. Lt., A.U.S.

Muscatine County

Ady, A. E., West Liberty (care PM, San Francisco, Cal.)U.S.N.R.
Asthalter, R. W., Muscatine (Fort Meade, Md.)..1st Lt., A.U.S.
Carlson, E. H., Muscatine (Kalamazoo, Mich.)....Capt., A.U.S.
Goad, R. R., Muscatine (Washington, D. C.) Lt. Cmdr., U.S.N.R.
Kimball, J. E., Jr., West Liberty (APO Miami, Fla.)
Lindley, E. L., Muscatine (APO Los Angeles, Cal.).Capt., A.U.S.
Muhs, E. O., Muscatine (Camp Robinson, Ark.)....Capt., A.U.S.
Norem, Walter, Muscatine (APO Miami, Fla.)....Capt., A.U.S.
Robertson, T. A., West Liberty (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Sywassink, G. A., Muscatine (Camp Campbell, Ky.)Major, A.U.S.
Whitmer, L. H., Wilton Junction (Fort Sill, Okla.).Major, A.U.S.

O'Brien County

Getty, E. B., Primghar (Camp Robinson, Ark.)..1st Lt., A.U.S.
Hayne, W. W., Paullina (APO New York, N. Y.)..1st Lt., A.U.S.
Moen, S. T., Hartley (APO New York, N. Y.)....Major, A.U.S.
Myers, K. W., Sheldon (Watertown, S. Dak.)..1st Lt., A.U.S.

Osceola County

Kuntz, G. S., Sibley (APO New York, N. Y.)

Page County

Blackman, Nathan, Shenandoah.....Capt., A.U.S.
Bossingham, E. N., Clarinda (Camp Roberts, Cal.)..Capt., A.U.S.
Burdick, F. D., Shenandoah (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Burnett, F. K., Clarinda (Fort Warren, Wyo.)....Major, A.U.S.
Little, E. B., Shenandoah.....1st Lt., A.U.S.
Rausch, G. R., Clarinda (Wendover Field, Utah) 1st Lt., A.U.S.
Savage, L. W., Shenandoah (Fort Meade, Md.)..1st Lt., A.U.S.

Palo Alto County

Davey, W. P., Emmetsburg (San Diego, Cal.) Lt. (jg), U.S.N.R.

Plymouth County

Foss, R. H., Remsen (Salt Lake City, Utah)..1st Lt., A.U.S.
Wolfson, Harold (Fort Lewis, Wash.).....Capt., A.U.S.

Pocahontas County

Blair, F. L., Jr., Fonda.....1st Lt., A.U.S.
Herrick, T. G., Gilmore City (Camp Hale, Colo.)..Capt., A.U.S.
Larson, J. B., Laurens (Camp Barkeley, Texas)..1st Lt., A.U.S.
Leserman, L. K., Rolfe (Camp Barkeley, Texas) .1st Lt., A.U.S.

Polk County

Abbott, W. D., Des Moines (Oakland, Cal.)..Lt. Cmdr., U.S.N.R.
Anderson, N. B., Des Moines (APO New York, N. Y.) .....Lt. Col., A.U.S.
Angell, C. A., Des Moines (Carlisle Barracks, Pa.).Capt.,A.U.S.
Anspach, R. S., Mitchellville (MacDill Field, Fla.) Major, A.U.S.
Barner, J. L., Des Moines (Atlanta, Ga.)....Major, A.U.S.
Barnes, B. C., Des Moines (Ogden, Utah).....Capt., A.U.S.
Bates, M. T., Des Moines (Fleet PO, New York, N. Y.) .....Lt. Cmdr., U.S.N.R.
Bender, H. R., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Bond, T. A., Des Moines (Quantico, Va.).....Lt. (jg), U.S.N.R.
Bone, H. C., Des Moines (Arlington, Cal.).....Capt., A.U.S.
Brown, A. W., Des Moines (Fort Leavenworth, Kan.) .....Capt., A.U.S.
Bruner, J. M., Des Moines (Fort Bliss, Texas)....Major, A.U.S.
Bruns, P. D., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Burgeson, F. M., Des Moines (APO New York, N. Y.) .....Capt., A.U.S.
Caldwell, J. W., Des Moines (Edmonton, Alberta, Canada) .....Flight Lt., R.C.A.F.
Chambers, J. W., Des Moines (Fort Riley, Kan.)..1st Lt., A.U.S.
Chase, W. B., Jr., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Clark, G. E., Jr., Des Moines (Randolph Field, Texas) .....1st Lt., A.U.S.
Connell, J. R., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Corn, H. H., Des Moines (St. Louis, Mo.).....1st Lt., A.U.S.
Coughlan, D. W., Des Moines (Camp Gruber, Okla.) Capt., A.U.S.
Crowley, D. F., Jr., Des Moines (APO New York, N. Y.) .....Capt., A.U.S.
Crowley, F. A., Des Moines (Hot Springs, Ark.) 1st Lt., A.U.S.
DeCicco, Ralph, Des Moines (APO Los Angeles, Cal.) .....Capt., A.U.S.
Decker, H. G., Des Moines (Long Beach, Cal.)....Lt., U.S.N.R.
Downing, A. H., Des Moines (Fort Snelling, Minn.) .....1st Lt., A.U.S.
Dushkin, M. A., Des Moines (Fort Huachuca, Ariz.) .....Capt., A.U.S.
Elliott, O. A., Des Moines (Pecos, Texas).....1st Lt., A.U.S.
Ellis, H. G., Des Moines (Casper, Wyo.).....1st Lt., A.U.S.
Ervin, L. J., Des Moines (Fort Clark, Texas)....Major, A.U.S.
Fried, David, Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Fracasse, John, Des Moines.....1st Lt., A.U.S.
George, E. M., Des Moines (Des Moines, Iowa) .....Lt. Cmdr., U.S.N.R.
Gerchek, E. W., Des Moines
Goldberg, Louie, Des Moines (Palm Springs, Cal.)..1st Lt., A.U.S.
Gordon, A. M., Des Moines (Fort Ord, Cal.)....Capt., A.U.S.
Graeber, F. O., Des Moines (Aberdeen, S. Dak.)..1st Lt., A.U.S.
Greek, L. M., Des Moines (Camp Crowder, Mo.)..1st Lt., A.U.S.
Gurau, H. H., Des Moines (Portland, Ore.)....1st Lt., A.U.S.
Haines, D. J., Des Moines (Denver, Colo.)....1st Lt., A.U.S.
Harris, D. D., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Harris, H. L., Des Moines.....1st Lt., A.U.S.
Hess, John, Jr., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
James, A. D., Des Moines (Great Lakes, Ill.) .....Lt. Cmdr., U.S.N.R.
Johnston, C. H., Des Moines (APO New York, N. Y.) .....Lt. Col., A.U.S.
Kast, D. H., Des Moines (Fort Stevens, Ore.).....Capt., A.U.S.
Kelley, E. J., Des Moines (Treasure Island, Cal.) .....Lt. Cmdr., U.S.N.R.
Kelly, D. H., Des Moines (Denver, Colo.).....Major, A.U.S.
Klocksiem, H. L., Des Moines.....Lt. (jg), U.S.N.R.
Kottke, E. E., Des Moines (Temple, Texas)....1st Lt., A.U.S.
Landis, S. N., Des Moines (West Palm Beach, Fla.) .....1st Lt., A.U.S.
La Tona, Salvatore, Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Lederman, James, Des Moines.....1st Lt., R.C.A.
Lehman, E. W., Des Moines (Memphis, Tenn.)....Major, A.U.S.
Lovejoy, E. P., Des Moines (Mare Island, Cal.) .....Lt. Cmdr., U.S.N.R.
Maloney P. J., Des Moines (Fort Lewis, Wash.) 1st Lt., A.U.S.
Marquis, G. S., Des Moines (Great Lakes, Ill.) .....Lt. Cmdr., U.S.N.R.
Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.
Mauritz, E. L., Des Moines (Camp Gruber, Okla.) 1st Lt., A.U.S.
McCoy, H. J., Des Moines (Iowa City, Iowa).Lt. Cmdr., U.S.N.R.
McDonald, D. J., Des Moines (March Field, Cal.).Capt., A.U.S.
McNamee, J. H., Des Moines (Seattle, Wash.) .....Lt. Cmdr., U.S.N.R.
Mencher, E. W., Des Moines.....1st Lt., A.U.S.
Merkel, B. M., Des Moines (Tullahoma, Tenn.)..Major, A.U.S.
Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.) .....Capt., A.U.S.
Morden, R. P., Des Moines (Edgewood Arsenal, Md.) .....1st Lt., A.U.S.
Murphy, J. H., Des Moines (San Diego, Cal.).....Lt., U.S.N.R.
Nelson, A. L., Des Moines (Camp Livingston, La.) Capt., A.U.S.
Noun, L. J., Des Moines (Great Lakes, Ill.)..Lt. (jg), U.S.N.R.
Noun, M. H., Des Moines (APO New York, N. Y.)..Major, A.U.S.
Nourse, M. H., Des Moines (Bethesda, Md.)..Lt. (jg), U.S.N.R.
Patton, B. W., Des Moines (Camp Robinson, Ark.).....1st Lt., A.U.S.
Pearlman, L. R., Des Moines (APO Seattle, Wash.) .....1st Lt., A.U.S.
Peisen, C. J., Des Moines (Camp Perry, Ohio)..1st Lt., A.U.S.
Penn, E. C., West Des Moines (Spokane, Wash.) .....1st Lt., A.U.S.
Pfeiffer, E. P., Des Moines (Springfield, Mo.)....Capt., A.U.S.
Phillips, A. B., Des Moines (Corpus Christi, Texas) .....Lt., U.S.N.R.
Porter, R. J., Des Moines (Santa Ana, Cal.)..1st Lt., A.U.S.
Powell, L. D., Des Moines (Long Beach, Cal.)..Cmdr., U.S.N.R.
Pratt, E. B., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Priestley, J. B., Des Moines (Camp Phillips, Kan.)..Major, A.U.S.
Purdy, W. O., Des Moines (Camp Howze, Texas)..Capt., A.U.S.
Riegelman, R. H., Des Moines (APO New York, N. Y.) .....Major, A.U.S.
Robinson, V. C., Des Moines (Tampa, Fla.)....Capt., A.U.S.
Rotkow, M. J., Des Moines (Louisville, Ky.)....1st Lt., A.U.S.
Schaeferle, M. J., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Schlaser, V. L., Des Moines (Chicago, Ill.)..Lt. (jg), U.S.N.R.
Shepherd, L. K., Des Moines (APO New York, N. Y.) .....1st Lt., A.U.S.
Shifler, H. K., Des Moines (APO New York, N. Y.).Capt., A.U.S.
Singer, P. L., Des Moines (Camp Grant, Ill.)..1st Lt., A.U.S.
Skultety, J. A., Des Moines (Brownsville, Texas) .....1st. Lt., U.S.P.H.S.
Smead, H. H., Des Moines (Bangor, Me.).....1st Lt., A.U.S.
Smith, H. J., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Smith, R. T., Des Moines (Meridian, Miss.)....1st Lt., A.U.S.
Snodgrass, R. W., Des Moines (Fort Rosecrans, Cal.) .....Capt., A.U.S.
Snyder, G. E., Grimes (Camp Robinson, Ark.)....1st Lt., A.U.S.
Sohm, H. A., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. Cmdr., U.S.N.R.
Sorensen, R. M., Des Moines (Topeka, Kan.).Major, U.S.P.H.S.
Springer, F. A., Des Moines (Treasure Island, Cal.) .....Lt. Cmdr., U.S.N.R.
Stearns, A. B., Des Moines (Denver, Colo.)..Major, A.U.S.
Stickler, Robert, Des Moines (Fort Benning, Ga.) 1st. Lt., A.U.S.
Stitt, P. L., Des Moines (Seattle, Wash.)....Lt. (jg), U.S.N.R.
Throckmorton, J. F., Des Moines (Camp Howze, Texas) .....Capt. A.U.S.
Toubes, A. A., Des Moines (Greenville, Miss.)..1st Lt., A.U.S.
Turner, H. V., Des Moines (Hot Springs, Ark.)..1st Lt., A.U.S.
Updegraff, Thomas, Des Moines (Spokane, Wash.).1st Lt., A.U.S.
Van Hale, L. A., Des Moines (Butler, Penn.)....1st Lt., A.U.S.
Vaubel, E. K., Des Moines (Portland, Ore.).....Capt., A.U.S.
Wagner, E. C., Des Moines (Washington, D. C.)..1st Lt., A.U.S.
Willett, W. M., Des Moines (Fort Bragg, N. C.)..1st Lt., A.U.S.
Wirtz, D. C., Des Moines (Great Lakes, Ill.).Lt. Cmdr., U.S.N.R.
Zarchy, A. C., Des Moines (Camp Cook, Cal.).....Capt., A.U.S.

Pottawattamie County

Beaumont, F. H., Council Bluffs (APO New York, N. Y.) .....Major, A.U.S.
Cogley, J. P., Council Bluffs (APO Los Angeles, Cal.) .....Capt., A.U.S.
Collins, R. M., Council Bluffs (San Diego, Cal.)....Lt., U.S.N.R.
Dean, A. M., Council Bluffs (Pensacola, Fla.) .....Lt. Cmdr., U.S.N.R.
Hennessy, J. D., Council Bluffs (Chicago, Ill.).1st Lt., A.U.S.
Jensen, A. L., Council Bluffs (APO San Francisco, Cal.) .....Lt. Col., A.U.S.
Klok, G. J., Council Bluffs (Athol, Idaho)....Lt. (jg), U.S.N.R.
Kurth, C. J., Council Bluffs (Camp Crowder, Mo.).1st Lt., A.U.S.
Limbert, E. M., Council Bluffs (Camp Carson, Colo.) .....Capt. A.U.S.
Maiden, S. D., Council Bluffs (San Francisco Cal.) .....Major, A.U.S.
Martin, L. R., Council Bluffs (APO Los Angeles, Cal. .....Capt., A.U.S.
Moskovitz, J. M., Council Bluffs (Camp Lockett Cal.) .....Capt., A.U.S.
Sternhill, Isaac, Council Bluffs (Fort Warren, Wyo.) .....Capt., A.U.S.

Tinley, R. E., Council Bluffs (APO New York, N. Y.) ..... Capt., A.U.S.
Treynor, J. V., Council Bluffs (South Bend, Ind.) ..... Lt. Cmdr., U.S.N.R.
Wieseler, R. J., Avoca (McChord Field, Wash.) ..... A.U.S.
Wurl, O. A., Council Bluffs (APO New York, N. Y.) ..... Capt., A.U.S.

Poweshiek County

Brobyn, T. E., Grinnell (Camp San Luis Obispo, Cal.) ..... Capt., A.U.S.
Hickerson, L. C., Brooklyn (Oxnard, Cal.) ..... 1st. Lt., A.U.S.
Korfmacher, E. S., Grinnell (San Francisco, Cal.) ..... Capt., A.U.S.
Niemann, T. V., Brooklyn (Camp Shelby, Miss.) ..... 1st Lt., A.U.S.
Parish, J. R., Grinnell (Treasure Island, Cal.) ..... Lt. Cmdr., U.S.N.R.

Ringgold County

Seaman, C. L., Mount Ayr (Van Buren, Ark.) .. Capt., A.U.S.

Sac County

Bassett, G. H., Sac City (San Diego, Cal.) .. Lt. Cmdr., U.S.N.R.
Deters, D. C., Schaller (APO New York, N. Y.) .. Capt., A.U.S.
Evans, W. I., Sac City (Camp Hood, Texas) .. 1st Lt., A.U.S.
Klocksiem, R. G., Odebolt (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Neu, H. N., Sac City (Jefferson Barracks, Mo.) ... Capt., A.U.S.

Scott County

Baker, R. W., Davenport (Rock Island, Ill.) .. 1st Lt., A.U.S.
Balzer, W. J., Davenport (APO Seattle, Wash.) .. 1st Lt., A.U.S.
Block, L. A., Davenport (APO New York, N. Y.) .. Major, A.U.S.
Bishop, J. F., Davenport (APO Seattle, Wash.) .. 1st Lt., A.U.S.
Boden, W. C., Davenport (Biloxi, Miss.) ..... Capt., A.U.S.
Brown, D. H., Davenport ..... Capt., A.U.S.
Brown, M. J., Davenport (Pando, Colo.) ..... Capt., A.U.S.
Carey, E. T., Davenport (Fort Devens, Mass.) .. 1st Lt., A.U.S.
Christiansen, C. C., Dixon (APO San Francisco, Cal.) ..... 1st Lt., A.U.S.
Cummins, G. M., Jr., Davenport ..... 1st Lt., A.U.S.
Decker, C. E., Davenport (Oklahoma City, Okla.) ..... 1st Lt., A.U.S.
Evans, H. J., Davenport (Colorado Springs, Colo.) . Capt., A.U.S.
Gibson, P. E., Davenport (Palm Springs, Cal.) .... Capt., A.U.S.
Hurevitz, H. M., Davenport (Fort Lewis, Wash.) .. Capt., A.U.S.
Hurteau, Everett, Davenport (APO New York, N. Y.) ..... 1st Lt., A.U.S.
Hurteau, W. W., Davenport (Camp Barkeley, Texas) ..... Major, A.U.S.
Kimberly, L. W., Davenport (New Orleans, La.) . Capt., A.U.S.
LaDage, L. H., Davenport (Camp Campbell, Ky.) .. Capt., A.U.S.
Lorfeld, G. W., Davenport (Fort Myers, Fla.) .... Capt., A.U.S.
Marker, J. I., Davenport (Camp Carson, Colo.) .. Col., A.U.S.
McMeans, T. W., Davenport (APO New York, N. Y.) ..... 1st Lt., A.U.S.
Neufeld, R. J., Davenport (Rock Island, Ill.) .. 1st Lt., A.U.S.
Shafer, A. W., Davenport (Camp Shelby, Miss.) .. 1st Lt., A.U.S.
Sheeler, I. H., Davenport (Omaha, Neb.) ..... 1st Lt., A.U.S.
Smazal, S. F., Davenport (Omaha, Neb.) ..... 1st Lt., A.U.S.
Sorenson, A. C., Davenport (Oakland, Cal.) .. Lt. Cmdr., U.S.N.R.
Sunderbruch, J. H., Davenport (Paris, Texas) .... 1st Lt., A.U.S.
Weinberg, H. B., Davenport (Fort Benning, Ga.) .. Major, A.U.S.
Zukerman, C. M., Bettendorf (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.

Shelby County

Bisgard, C. V., Harlan (Farragut Air Base, Idaho) ..... Lt. Cmdr., U.S.N.R.
Griffith, W. O., Shelby ..... A.U.S.

Sioux County

Gleysteen, R. R., Alton (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Grossmann, E. B., Orange City (Fort Sam Houston, Texas) ..... 1st Lt., A.U.S.
Larsen, M. O., Hawarden (Camp Robinson, Ark.) .. Major, A.U.S.

Story County

Conner, J. D., Nevada (Camp Robinson, Ark.) .... 1st Lt., A.U.S.
Fellows, J. G., Ames (Carlisle Barracks, Penn.) . Capt., A.U.S.
Lekwa, A. H., Story City (San Diego, Cal.) .. Lt. Cmdr., U.S.N.R.
McFarland, G. E., Jr., Ames (San Pedro, Cal.) .... Lt., U.S.N.R.
McFarland, J. E., Ames (Farragut, Idaho) .. Lt. Cmdr., U.S.N.R.
Rosebrook, L. E., Ames (Randolph Field, Texas) . 1st Lt., A.U.S.
Sperow, W. B., Nevada (San Diego, Cal.) .. Lt. Cmdr., U.S.N.R.
Thorburn, O. L., Ames (Las Vegas, Nevada) .. Major, A.U.S.

Tama County

Boller, G. C., Traer (Fort Leonard Wood, Mo.)
Dobias, S. G., Chelsea (APO Seattle, Washington)
Havlik, A. J., Tama (Fleet PO, San Francisco, Cal.) . Lt. U.S.N.R.
Schaeferle, L. G., Gladbrook (Fort Leonard Wood, Mo.)
Standefer, J. M., Tama (San Diego, Cal.)

Taylor County

Hardin, J. F., Bedford (Fort Leonard Wood, Mo.)

Union County

Paragas, M. R., Creston (Avon Park, Fla.) ..... Capt., A.U.S.
Ryan, C. J., Creston (Scribner, Neb.) ..... 1st Lt., A.U.S.

Wapello County

Brentan, Emanuel, Ottumwa (Moline, Ill.)
Brody, Sidney, Ottumwa
Gilfillan, C. D. N., Eldon (Battle Creek, Mich.)
Hughes, R. O., Ottumwa (San Diego, Cal.)
Nelson, F. L., Jr., Ottumwa
Prewitt, L. H., Ottumwa
Selman, R. J., Ottumwa (El Paso, Texas)
Struble, G. C., Ottumwa (Fort Harrison, Ind.)
Whitehouse, W. N., Ottumwa
Worley, C. L., Ottumwa (Camp Shelby, Miss.) .... Capt., A.U.S.

Warren County

Fullgrabe E. A., Indianola (Bethesda, Md.) Lt. (jg), U.S.N.R.
Shaw, E. E., Indianola (APO New Orleans, La.) .... Capt., A.U.S.
Trueblood, C. A., Indianola (Camp Campbell, Ky.) 1st Lt., A.U.S.

Washington County

Boice, C. L., Washington (Pensacola, Wash.) Lt. (jg), U.S.N.R.
Droz, A. K., Washington (Grosse Ile, Mich.) . Lt. Cmdr., U.S.N.R.
Mast, T. M., Washington (Sioux Falls, S. D.) Lt. (jg), U.S.N.R.
Stutsman, R. E., Washington (Pensacola, Fla.) .... Lt., U.S.N.R.
Ware, S. C., Kalona (Fort Meade, Md.) ..... 1st Lt., A.U.S.

Wayne County

Hyatt, C. N., Jr., Humeston (Indio, Cal.) ..... Capt., A.U.S.

Webster County

Baker, C. J., Fort Dodge (Camp Claiborne, La.) ..... Capt., A.U.S.
Burch, E. S., Dayton (Camp Livingston, La.) ..... Capt., A.U.S.
Burleson, M. W., Fort Dodge ..... Major, A.U.S.
Coughlan, C. H., Fort Dodge (Jefferson Barracks, Mo.) ..... Major, A.U.S.
Joyner, N. M., Fort Dodge (Brooklyn Field, Ala.)
Kluever, H. C., Fort Dodge ..... Lt. Cmdr., U.S.N.R.
Larsen, H. T., Fort Dodge (Newport R. I.) ..... Lt. (jg), U.S.N.R.
Shrader, J. C., Fort Dodge (Camp Young, Cal.) .... Major, A.U.S.
Thatcher, O. D., Fort Dodge (Kelly Field, Texas) .. 1st. Lt., A.U.S.
Thatcher, W. C., Fort Dodge ..... Capt., A.U.S.
Van Patten, E. M., Fort Dodge ..... 1st Lt., A.U.S.

Winneshiek County

Fritchen, A. F., Decorah (APO San Francisco, Cal.) .... U.S.N.R.
Hospodarsky, L. J., Ridgeway (Seattle, Wash.) .. Capt., A.U.S.
Larson, L. E., Decorah (Farragut, Idaho) ..... U.S.N.R.
Svendsen, R. N., Decorah (San Diego, Calif.) .. Lt. (jg) U.S.N.R.
Van Besien, G. J., Decorah (Fort Leavenworth, Kan. .... A.U.S.

Woodbury County

Bettler, P. L., Sioux City (APO San Francisco, Cal.) ..... Major, A.U.S.
Blackstone, M. A., Sioux City (Pittsburg, Cal.) . 1st Lt., A.U.S.
Boe, Henry, Sioux City (Salina, Kan.) ..... Capt., A.U.S.
Burroughs, H. H., Sioux City ..... Lt. (jg), U.S.N.R.
*Cmeyla, P. M., Sioux City (APO San Francisco, Cal.) ..... Capt., A.U.S.
Crowder, R. E., Sioux City (San Diego, Cal.) Lt. Cmdr., U.S.N.R.
Dimsdale, L. J., Sioux City (Camp Claiborne, La.) . 1st Lt., A.U.S.
Down, H. I., Sioux City (Camp Breckenridge, Ky.) Major, A.U.S.
Elson, V. J., Danbury (APO Seattle, Wash.)
Frank, L. J., Sioux City (Mare Island, Cal.) . Lt. Cmdr., U.S.N.R.
Graham, J. W., Sioux City (San Diego, Cal.) . Lt. Cmdr., U.S.N.R.
Grossman, Milton, Sioux City (Hobbs, N. M.) .. Capt., A.U.S.
Heffernan, C. E., Sioux City (Salt Lake City, Utah) ..... 1st Lt., A.U..S
Hicks, W. K., Sioux City (Fort Riley, Kan.) .. Major, A.U.S.
Honke, E. M., Sioux City (Palm Springs, Cal.) .. Capt., A.U.S.
Kaplan, David, Sioux City (Fort Bragg, N. C.) .. 1st Lt., A.U.S.
Knott, R. C., Sioux City (New York, N. Y.) .... Capt., A.U.S.
Krigsten, W. M., Sioux City (Springfield, Mo.) .. Lt. Col., A.U.S.
Martin, R. F., Sioux City (Camp Atterbury, Ind.) 1st Lt., A.U.S.
Mattice, L. H., Danbury (Camp Livingston, La.) ..... 1st Lt., A.U.S.
McCuistion, H. M., Sioux City (APO New York, N. Y.) ..... Capt., A.U.S.
Mugan, R. C., Sioux City (Gowen Field, Idaho) .. 1st Lt., A.U.S.
Osincup, P. W., Sioux City (Sioux City Air Base, Iowa) ..... 1st Lt., A.U.S.
Rarick, I. H., Sioux City (Soquel, Cal.) ..... 1st Lt., A.U.S.
Reeder, J. E., Jr., Sioux City (Modesto, Cal.) .... Capt., A.U.S.
Ryan, M. J., Sioux City (Topeka, Kan.) ..... Capt., A.U.S.
Schwartz, J. W., Sioux City (Camp Crowder, Mo.) . Major, A.U.S.
Tracy, J. S., Sioux City (Salt Lake City, Utah) .... Capt., A.U.S.
Wilson, L. L., Sioux City (Camp San Luis Obispo, Cal.) ..... Capt., A.U.S.

Worth County

Westley, G. S., Manly (Camp Forrest, Tenn.) .. Major, A.U.S.

Wright County

Aageson, C. A., Dows
Bird, R. G., Clarion (San Diego, Cal.) ..... Lt. Cmdr., U.S.N.R.
Doles, E. A., Clarion (Phoenix, Ariz.)
Leinbach, S. P., Belmond (Farragut Air Base, Idaho)
Missildine, W. H., Eagle Grove (APO San Francisco, Cal.) ..... Capt., A.U.S.

(*) Reported missing in action.

SPEAKERS BUREAU ACTIVITIES

SCIENTIFIC FILMS

The Speakers Bureau has recently received a comprehensive list of scientific films approved by the American Medical Association and the American College of Surgeons. These films may be secured for a small rental fee. Since the Bureau is unable to continue with the usual postgraduate courses, we shall gladly make the necessary arrangements for the rental of any of these films for your local society meetings.

A few of the available sixteen millimeter films are listed below:

Hernioplasty for Direct Inguinal Hernia—Lawrence S. Fallis, M.D., Detroit, Michigan.

Surgery of the Biliary Tract—Ralph Bettman, M.D., Chicago, Illinois.

Leg Amputation Below the Knee—Atha Thomas, M.D., Denver, Colorado.

The Larynx, Tracheobronchial Tree and Esophagus —Paul H. Holinger, M.D., Chicago, Illinois.

Thyroidectomy for Diffuse Goiter with Hyperthyroidism—George Crile, Jr., M.D., Cleveland, Ohio.

Complete Neck Dissection for Metastatic Carcinoma—James B. Brown, M.D., and Frank McDowell, M.D., St. Louis, Missouri.

Cataract Surgery—A. D. Ruedemann, M.D., Cleveland, Ohio.

Regional Anesthesia for Operations on the Neck—Ralph M. Tovell, M.D., Rochester, Minnesota.

The Prevention and Treatment of Eclampsia—Joseph B. DeLee, M.D., Chicago, Illinois.

Carcinoma of Breast. Radical Mastectomy. Transverse Incision—Stuart W. Harrington, M.D., Rochester, Minnesota.

Partial Gastrectomy—Donald E. Ross, M.D., Los Angeles, California.

Pernicious Anemia—William P. Murphy, M.D., Boston, Massachusetts.

Purposeful Splinting Following Injuries of the Hand—Sumner L. Koch, M.D., Michael L. Mason, M.D., and Harvey S. Allen, M.D., Chicago, Illinois.

Transcranial Removal of Intraorbital Tumors—J. Grafton Love, M.D., Rochester, Minnesota.

Treatment of Traumatic Injuries of the Face—Gordon B. New, M.D., and John B. Erich, M.D., Rochester, Minnesota.

Abdominal Pelvic Operation for Residues of Infection—Arthur H. Curtis, M.D., Chicago, Illinois.

Subtotal Gastrectomy for Perforating Duodenal Ulcer—The Lahey Clinic, Boston, Massachusetts.

One Stage Lobectomy for Bronchiectasis—Paul W. Sanger, M.D., Charlotte, North Carolina.

Marshall County Medical Society

Alonzo L. Jenks, M.D., Des Moines, will speak before the Marshall County Medical Society at its meeting in Marshalltown at the Hotel Tallcorn, Tuesday evening, February 2, at 6:30 p. m. The subject of his address will be The Recognition of Pernicious Anemia and Its Treatment. Dr. Jenks' lecture will be accompanied by a number of colored blood slides.

Wayne County Medical Society

The Wayne County Medical Society will have its monthly meeting in Corydon on February 9 at eight o'clock. The program will consist of a scientific recording entitled "The Diagnosis and Treatment of Anemia" by Raphael Isaacs, M.D., of Chicago. Printed copies of blood reports and standards and formulas of blood cells will be distributed to the attending physicians.

RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.

WOI—Wednesdays at 2:05 p. m.

February	1-3	Venereal Disease Andrew C. Woofter, M.D.
February	8-10	Fractures and Their Emergency Care William G. Bessmer, M.D.
February	15-17	Middle Ear Infections Harry Frey, M.D.
February	22-24	Indigestion Aileen E. Mathiasen, M.D.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. F. W. MULSOW, Cedar Rapids
President-Elect—MRS. W. S. REILEY, Red Oak
Secretary—MRS. A. G. FELTER, Van Meter
Treasurer—MRS. A. E. MERKEL, Des Moines

RED CROSS HOME NURSING SERVICE*

Every American home is a center of defense against loss of production hours caused by common illnesses. Every hour of production lost by us, whether in war plants or in industries supplying civilian needs, is an hour of similar production gained by our enemies.

The Red Cross Home Nursing Service defends our homes by helping maintain the nation's health. Doctors and nurses are being called into the services of the Army and Navy; many hospitals are filled to capacity. Civilians face the serious problem of caring for the sick. In the future, much of this sickness must be cared for in the home. Most illnesses causing loss of time in industry might be prevented if proper precautions were observed in the home and community, and most of them can be cared for adequately in the home if someone there has proper training. Colds cost more than half of the absences from work. Influenza, tonsillitis, pneumonia, tuberculosis, and communicable diseases common to children are high on the list, according to a recent survey of the United States Public Health Service.

By preparing individuals to care for illness at home, under a doctor's supervision when required, the Red Cross Home Nursing Service helps relieve the strain on doctors and nurses caused by war shortages. Taught by the Red Cross Nursing Service, in cooperation with home economics teachers and leading nutritionists, the courses, which have been given for thirty years, are of more importance than ever now, because the war emergency has overcrowded many areas and consequently overtaxed local health resources.

More than half (51.75 per cent) of the Iowa quota for Home Nursing training in the fiscal year ending June 30, 1943, already has been reached. Twenty-five chapters have filled their quota set by national headquarters with 100 per cent or more, and South Dallas County heads the list with 213 per cent. Between July 1 and December 31, 1942, 557 classes were organized through the efforts of 999 instructors. Out of 130 Iowa chapters, only three have no Home Nursing activity. The State Department of Health in Iowa has cooperated with the Red Cross in promoting the Home Nursing Service program to train 18,700 women through health institutes, with county nurses serving as instructors. Many other nurses, some of them busy housewives, also are serving as volunteer teachers.

Should any Iowa city be made a clearing point for war casualty cases, or should an epidemic strike, hospitals would be taxed to the limit. With such eventualities in mind, local Red Cross chapters are prepared to train thousands of women to care for sickness in their own homes.

Surgeon General Thomas Parran of the United States Public Health Service, said: "Every housewife should take advantage of the training given by the Red Cross in First Aid, Home Nursing, and Nutrition. Such training fits them to give more intelligent care to their families when illness comes, with the minimum of professional supervision . . . ."

The means of insuring safe and more healthful homes and more satisfactory family relationships thus are available to every citizen who wishes to help in the defense of the nation.

*From the American Red Cross Public Information Service.

DON'T MARRY A DOCTOR*

By A Navy Officer's Wife

To be married to a doctor is indeed a unique experience. In your teens, when you wonder whether it will be a doctor, lawyer, merchant, or chief that will be your doom, you hear women and girls whisper to themselves, "Don't marry a doctor." You wonder why?

All doctors see a great deal of suffering at a hospital and learn a great deal about courage. They have little respect for a man who can't take it. Why is it then, knowing that true character is shown through suffering, that doctors are such babies? Loud moans and laments can be heard when his wife has to remove a sliver or clean a tiny cut. This is one of those professional secrets a doctor's wife must forever conceal.

Think of the doctors' wives you know. Are they brimming with health and vitamins? If so, they

*From the January, 1943, issue of THE WAR DOCTOR.

are probably former nurses, for the average doctor listens to his wife's complaints of poison-ivy, bad burns and cuts while reading the evening paper, mumbling a hasty, "That's too bad, dear." It is only because of their crafty strategy that the mortality rate among doctors' wives remains average.

One of the most difficult feats a doctor's wife has to perform is locating an aspirin. Somewhere in the drawer, filled with medicine samples, there must be an aspirin. Millions of pills of all shapes and sizes loom before her, each bearing a Latin, German, or possibly a Russian label. It would have been so much simpler if she had epilepsy or maybe leprosy instead of a simple headache.

One of the first requirements of a good doctor's wife is a strong and insensitive stomach. She must be able to eat rare meat to the tune of the story of the most messy accident of the day. Her stomach must never quaver to such comments as, "Do we eat this or have we?" while serving a custard. This is apt to lead to discussions of the stomach pump, so she must never flinch.

Getting really medically minded you ask for news of an ill friend who is his patient. This question is greeted with "Her condition is favorable," which was precisely the standard answer the hospital gave.

Could these be some of the reasons why most young girls are told to marry lawyers instead of doctors?

NOTICE TO COUNTY PRESIDENTS

Please do not fail to have your secretary mail a report of each meeting to the State Chairman of Press and Publicity. The National Chairman requests a report from each State Chairman at the end of the year.

Mrs. K. M. Chapler, Chairman,
Press and Publicity Committee.

BOOK NOTES

The following list of books will be of especial interest now that foods are being strictly rationed and so many of the foods which we considered essential are now unavailable.

Victory Vitamin Cook Book of Good Food by Florence Harris is concerned with vitamin content in foods and explains what substitutions may be made in meals without impairing vitamin content. The author is a recognized economist and food expert.

WATCH....

For the introduction of the compulsory smallpox vaccination bill.

Mrs. Appleyard's Kitchen by Louise A. Kent is intended mainly to be read as was *Mrs. Appleyard's Year*. It discusses food in the same mouth-watering manner, but is quite practical.

What the Citizen Should Know About Nutrition was written by Grace MacLeod, Professor of Nutrition at Columbia University. This volume presents in non-technical language the essential facts and discoveries in the field of nutrition.

Home Canning for Victory, edited by Anne Pierce, contains the approved government methods for pickling, preserving, dehydrating, and canning. There are also suggestions for necessary appliances, rules for sugar conservation, and recipes which cover the preparation of food from garden or market to pantry.

What Do We Eat Now? by Robertson, MacLeod, and Preston lists practical and economical recipes and ideas on stretching the food dollar and managing family finances.

The Nutrition Handbook by Demetria Taylor is another of the volumes which explains the science of nutrition and how to balance properly the food selection and meal planning.

Our Children Face War by Anna Wolf, who is an authority on child guidance, is the author's answer to parents concerning how they should respond when their children ask why we have war. She is not dogmatic when she asks us to consider the experience of the British. Her answers are indeed provocative to the questions, "Have we raised our children soft?" and "Shall we teach our children to hate?"

How to Dress in Wartime by Winifred Raushenbush is a fashion writer's conclusions regarding expected clothes shortages. With twenty-five pages of illustrations, she shows the reader how to solve the problem of wartime dressing. She spent many weeks interviewing officials in Washington, and four government agencies checked her material, so it should be as authentic as is possible.

Mrs. K. M. Chapler

SPEAKERS BUREAU
RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.

WOI—Wednesdays at 2:05 p. m.

February 1-3 Venereal Disease
Andrew C. Woofter, M.D.

February 8-10 Fractures and Their Emergency Care
William G. Bessmer, M.D.

February 15-17 Middle Ear Infections
Harry Frey, M.D.

February 22-24 Indigestion
Aileen E. Mathiasen, M.D.

SOCIETY PROCEEDINGS

Audubon County

Officers elected to serve the Audubon County Medical Society during the coming year include: Dr. William H. Halloran of Audubon, president; and Dr. Peter E. James of Elkhorn, vice president, secretary and delegate.

Black Hawk County

The regular monthly meeting of the Black Hawk County Medical Society was held in Waterloo at Black's Tea Room Tuesday evening, January 19. The scientific program consisted of movies showing radium treatment of cancer of the mouth and the effects of drugs on gastro-intestinal motility.

Cherokee County

The Cherokee County Medical Society will hold its annual election of officers at its meeting Tuesday, February 9, at the Sioux Valley Hospital in Cherokee.

Dallas-Guthrie Society

The Dallas-Guthrie Medical Society and its Woman's Auxiliary met Thursday noon, January 21, at the Rotary Club Rooms in Adel. The scientific program for the medical society, which was held immediately following dinner, included a discussion of Therapeutic Advances for 1942 by Peter W. Beckman, M.D., of Perry, Coronary Thrombosis by Allan G. Felter, M.D., of Van Meter, and Inflammatory Colitis by John F. Loosbrock, M.D., of Perry.

Emmet County

Officers elected at the annual meeting of the Emmet County Medical Society include: Dr. George H. West of Armstrong, president; Dr. George B. Johnston of Estherville, vice president; Dr. Luther W. Loving of Estherville, secretary and treasurer; and Dr. Cleanthus E. Birney of Estherille, delegate.

Hardin County

The Hardin County Medical Society met Tuesday, January 12, at the Cozy Coffee Shop in Eldora. Officers elected to serve the society during the coming year are: Dr. Rasmus R. Gaard of Radcliffe, president; Dr. George A. Blaha of Whitten, vice president; and Dr. William E. Marsh of Eldora, secretary.

Humboldt County

The Humboldt County Medical Society met in Humboldt Thursday evening, January 14, at the office of Dr. Cloyce A. Newman. The program for the evening consisted of two scientific movies furnished by Mead Johnson and Company. The subjects presented were Breech Extraction and Physical Examination of the Infant.

C. A. Newman, M.D., Secretary

Johnson County

The regular monthly meeting of the Johnson County Medical Society was held at Hotel Jefferson in Iowa City Wednesday, January 6. Residents of the Department of Surgery at the University Hospital presented the scientific program on Care of the Abdominal Surgical Patient. Robert N. Bartels, M.D., reviewed certain important aspects of preoperative treatment; Edward L. Besser, M.D., discussed care of the patient during the operation; and Robert T. Tidrick, M.D., emphasized the postoperative management of patients who have had abdominal surgical procedures.

A. L. Sahs, M.D., Secretary

Louisa County

The Louisa County Medical Society met Thursday, December 10, in Grandview. A general business meeting was held and society dues collected for the ensuing year. Dues were waived for Dr. Kyle T. DeYarman of Morning Sun who is now in military service.

O. A. Kabrick, M.D., Secretary

Mahaska County

Officers were elected to serve the Mahaska County Medical Society for 1943 at a meeting of the society Monday, January 11, at Mahaska Hospital in Oskaloosa. They include: Dr. Philip M. Day, president; Dr. LeRoy F. Catterson, vice president; Dr. Francis A. Gillett, secretary; and Dr. Edgar B. Wilcox, treasurer. All officers are of Oskaloosa.

Monona County

Members of the Monona County Medical Society held their monthly meeting at the Davis Hotel in Ute Friday evening, December 11, at 6:30 p. m. Following dinner a business meeting was held and also a discussion of Immunization of Children and Civilian Defense.

Montgomery County

The Montgomery County Medical Society held its regular monthly meeting Thursday, January 14, at the Murphy Memorial Hospital in Red Oak. The annual election of officers was held with the following results: Dr. Carrol C. Nelson of Red Oak, president; Dr. Fred A. Hansen of Red Oak, vice president; and Dr. Edward J. C. Panzer of Stanton,

secretary and treasurer. The scientific program consisted of a discussion of virus pneumonia by Helge Borre, M.D., Emerson, and a film made by the University of Minnesota showing new technic in the field of surgery.

Polk County

The annual meeting of the Polk County Medical Society was held at Younkers Tea Room in Des Moines Wednesday, January 20, at 6:30 p. m. Officers elected to serve the Society for 1943 are: Dr. Christian B. Luginbuhl, president-elect; Dr. Edward W. Anderson, secretary; Dr. Alonzo L. Jenks, Jr., councilor-at-large; and Dr. Charles C. Walker, trustee. Dr. James A. Downing was inducted as president for the year, having been named president-elect last year. All officers are of Des Moines. A panel discussion was held concerning prophylactic procedures in cases of typhoid fever, smallpox, whooping cough, diphtheria and such diseases. The panel speakers were Lee F. Hill, M.D., James E. Dyson, M.D., Charlotte Fisk, M.D., Carl F. Jordan, M.D., and Arnold M. Smythe, M.D., all of Des Moines.

The February meeting of the Society will be held at Younkers Tea Room Monday, February 15, at 6:30 p. m. The guest speaker for the evening will be Eugene R. Kellersberger, M.D., medical missionary from the American Mission to Lepers, who will discuss sleeping sickness.

Pottawattamie County

The Pottawattamie County Medical Society held its monthly meeting at Hotel Chieftain in Council Bluffs Tuesday, January 19, at 6:30 p. m. Aldis A. Johnson, M.D., of Council Bluffs was in charge of the scientific program, which included a six month report on the venereal disease clinic by Gerald V. Caughlan, M.D., of Council Bluffs and a report by Dr. Johnson on industrial accidents due to inhalation of gas fumes. It was announced that the next meeting of the Society would be held Tuesday, February 16.

Poweshiek County

Officers elected to serve the Poweshiek County Medical Society during the coming year include: Dr. Walter B. Phillips of Montezuma, president; Dr. Delano Wilcox of Malcom, vice president; and Dr. Clinton E. Harris of Grinnell, secretary.

Scott County

The Scott County Medical Society held its first meeting of the year at the Lend-A-Hand Club in Davenport Tuesday, January 5, at 6:00 p. m. The guest speaker for the evening was Olan R. Hyndman, M.D., associate professor of surgery at the State University of Iowa College of Medicine. Dr. Hyndman discussed Pain, Neuralgia, and Neuritis.

Leo J. Miltner, M.D., Secretary

Tama County

The Tama County Medical Society has elected the following officers to serve during 1943: Dr. Edson C. Knight of Garwin, president; Dr. Harry S. Bezman of Traer, vice president; Dr. Charles W. Maplethorpe of Toledo, secretary and treasurer; and Dr. Knight, delegate.

C. W. Maplethorpe, M.D., Secretary

Washington County

The Washington County Medical Society met Tuesday, December 15, in Washington. The annual election of officers resulted as follows: Dr. Frank M. Mahin of Ainsworth, president; Dr. John M. Lloyd of Washington, vice president; and Dr. William S. Kyle of Washington, secretary and treasurer.

Wayne County

The Wayne County Medical Society met in regular session Tuesday evening, January 12, at the Corydon Hospital. The scientific program consisted of a paper on Herpes Zoster by Arthur E. Davis, M.D., of Seymour and a recorded lecture on The Making of a Diagnosis by David P. Barr, M.D., formerly of St. Louis.

C. T. Brubaker, M. D., Secretary

Winneshiek County

The annual meeting of the Winneshiek County Medical Society was held Wednesday, December 16, and the following officers were elected to serve for the ensuing year: Dr. Leo C. Kuhn of Decorah, president; Dr. John G. Goggin of Ossian, vice president; Dr. Ralph M. Dahlquist of Decorah, secretary and treasurer; Dr. Edward F. Hagen of Decorah, censor; Dr. Felix A. Hennessy of Calmar, delegate; and Dr. James J. Daly of Decorah, alternate delegate.

R. M. Dahlquist, M.D., Secretary

Woodbury County

Officers elected to serve the Woodbury County Medical Society during the coming year include: Dr. Robert N. Larimer, president; Dr. Raymond J. Duling, vice president; and Dr. Roland T. Rohwer, secretary and treasurer. All officers are of Sioux City.

Medical Women's Study Club

The Medical Women's Study Club met Tuesday evening, January 12, with Dr. Helen Johnston of Des Moines. The speaker for the evening was Generva Schmidt, M.D., of Des Moines, who discussed Medicolegal Considerations Commonly Met by the Doctor.

PERSONAL MENTION

Dr. Elmer E. Sherman, who has practiced in Keosauqua for the past several years, has retired from active practice and will make his home with his daughter in Knoxville.

Dr. Harold E. Haymond of Perry has announced that he is closing his office there and will move to Greeley, Colorado, where he will continue his practice of medicine.

Dr. Edwin J. Goen has become associated in the practice of medicine with Dr. Charles W. McQuillen of Charles City. Recently Dr. Goen has been practicing in Manchester.

Dr. Clarence A. Johnson has returned to Iowa for the practice of medicine. He has located in Coon Rapids in the office of the late Dr. Channing E. Wolfe. For several years Dr. Johnson practiced in Moorehead before locating in Larimore, North Dakota, where he has been for the past three and one-half years.

Dr. Eugene W. Scheldrup, associate professor of anatomy at the State University of Iowa, recently spoke before the Hennepin County Medical Society in Minneapolis on The Anatomic Basis of the Diagnosis and Treatment of Hand Infection.

Dr. Charles C. Coady, formerly of Dubuque, has moved to Kansas City, Kansas, where he has accepted a position on the staff of the hospital of the North American Aviation Corporation.

Dr. Harold W. Morgan of Mason City spoke before the Lions Club of that city at its meeting Wednesday, January 20. Dr. Morgan discussed the blood bank of the Cerro Gordo County Medical Society and gave a summary of its first six weeks of operation.

Dr. Lawrence L. Davidson of Lake City has announced that he is closing his hospital and office there and is moving to Santa Monica, California, where he will be associated with the Madsen Medical Group of that city.

Dr. Donald M. Harris, who has been medical director of district health service No. 3 with headquarters in Spencer, has been transferred to a similar position in district health service No. 8 with headquarters in Manchester.. He succeeds Dr. Chester L. Putnam who was recently appointed director of local health services for the State Department of Health.

Dr. William J. Elliott of Dawson has recently announced that he is discontinuing his practice of medicine because of ill health. He plans to remain in Dawson after retirement.

MARRIAGES

Miss Lucile Tindle, daughter of Mr. and Mrs. W. E. Tindle of Malcom, and Dr. LeRoy F. Catterson of Oskaloosa were united in marriage at the Methodist Church in Montezuma Sunday afternoon, December 13. They are making their home in Oskaloosa where Dr. Catterson has been practicing for several years.

Miss Madeline Rue, daughter of Mr. and Mrs. Charles J. Rue of Bismarck, North Dakota, and Dr. Howard W. Smith of Woodward were married Christmas day at the home of Dr. and Mrs. Lawrence D. Smith of Des Moines. The couple will reside in Woodward where Dr. Smith has been engaged in the practice of medicine for the past several years.

DEATH NOTICES

Costello, William Edward, of Dubuque, aged seventy-six, died January 17 following a short illness. He was graduated in 1894 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Dubuque County Medical Society.

Fulliam, Edmond B. B., Jr., of Muscatine, aged fifty-one, died January 10 after an extended illness. He was graduated in 1913 from the Bennett College of Eclectic Medicine and Surgery in Chicago, and at the time of his death was a member of the Muscatine County Medical Society.

Jones, Jesse Isaac, of Manchester, aged forty-nine, died suddenly December 28 following a heart attack. He was graduated in 1920 from the Ohio State University College of Homeopathic Medicine in Columbus, and at the time of his death was a member of the Delaware County Medical Society.

Lapsley, Robert McKee, aged seventy-two, died January 5 following an extended illness. He was graduated in 1890 from the College of Physicians and Surgeons in Keokuk, and at the time of his death was a member of the Lee County Medical Society. A more complete obituary will be found in the History of Medicine Section of this issue of the Journal.

History of Medicine in Iowa

Edited by the Historical Committee

Dr. Frank M. Fuller, Keokuk
Dr. Paul E. Gardner, New Hampton
Dr. John T. McClintock, Iowa City
Dr. Henry G. Langworthy, Dubuque
Dr. Walter L. Bierring, Des Moines

Robert McKee Lapsley, M.D.

1870-1943

An Appreciation

When one is called upon to give an expression of appreciation of the life of a friend of many years, one finds it most difficult to give an expression to those things which one feels.

When those of us who had been so closely associated with Dr. Robert McKee Lapsley realized that he had gone to the hospital, we knew that our associations had come to an end, insofar as this life is concerned.

With the death of Dr. Lapsley at five o'clock Tuesday morning, January 5, 1943, Keokuk, the state of Iowa, and the Iowa State Medical Society lost an invaluable citizen as well as the skilful services of a physician and surgeon whose career as an eye, ear, nose and throat specialist had been closely identified with the community for more than a half century. When knowledge of the imminence of death spread throughout the city, it was met with shocked surprise and profound sorrow, since he was a man who in his quiet way had influenced the lives of untold numbers of persons.

Born in Clarke County, Missouri, Dr. Lapsley first associated himself with Keokuk as a student in the old Keokuk College of Physicians and Surgeons. Later, he returned as a professor in the Keokuk Medical College and finally in 1894 established a practice here which he followed with pre-eminent success.

He was graduated in 1890 from the College of Physicians and Surgeons at Keokuk, but due to the fact that he had not yet become of age, he went to Chicago to complete his studies at Rush Medical College, from which he was graduated in 1891. He was still not satisfied that his training was sufficient, so in 1892 he entered and graduated from a clinical course at Rush Medical College. He continued with a postgraduate course at the Manhattan Eye and Ear Infirmary in New York City in 1893, serving as clinical assistant while there.

In 1898, he went abroad to study at the Royal London Ophthalmic Hospital and the Central London Throat and Ear Hospital where he also acted as clinical assistant in addition to attending clinics. Somewhat later, he took postgraduate clinic work in Vienna, Austria, under world renowned specialists.

Returning to Keokuk, he lectured on anatomy at the Keokuk Medical College. He began his practice of medicine in Hannibal, Missouri, but was soon asked to return to Keokuk and become Professor of Ophthalmology and Otology in the Keokuk Medical College. He practiced continuously in Keokuk since 1894 and served as president of the staff of St. Joseph Hospital since 1928.

Aside from his prominence in the medical profession, Dr. Lapsley was also active in religious, civic, fraternal and social circles, and his fundamental Christian character, as well as his essential kindness and consideration of others, brought him a great wealth of friendship. He was identified with all social and civic interests in Keokuk. For many years, he served as an officer of Westminster Presbyterian Church. He was a fellow of the American Medical Association, the American Academy of Ophthalmology and Laryngology (life membership), a fellow and charter member of the American College of Surgeons, a member of the Masonic Order, Davenport Consistory, Keokuk Club, Country Club, and a supporting member of the Y. M. C. A.

Dr. Lapsley's association with the Iowa State Medical Society brought recognition from the profession throughout the state of his outstanding ability in his professional work. His courteous, quiet, undemonstrative manner of life drew to him a constant and continuously increasing friendship.

To those of us who were closely associated with him in medical teaching, in consulting practice, and in everyday social contacts, he carried the high regard and respect of everyone. He will be deeply and sincerely missed. Real sorrow and grief will be associated with his name through the years.

Frank M. Fuller, M.D.

A History of Medicine in Plymouth County

WENDELL L. DOWNING, M.D.
Le Mars, Iowa

The history of medicine in Plymouth County begins soon after the first settlers arrived in this northwest territory about 1856. Little is known of any practitioners until 1870, but some meager medical service was rendered before that time. A "Doctor" Earl was the first doctor of record, and he was in the county about 1860. He later moved to Minnesota where one of his sons was killed in the massacre at New Ulm.

For the sake of brevity this history will be limited largely to factual data concerning the many physicians who have at some time practiced in the county. Blizzards, grasshopper plagues, and other hardships experienced by early settlers, also greatly influenced the lives of the early physicians. The information concerning the physicians who have been located in Plymouth County will be given chronologically as nearly as possible.

LE MARS

The town of Le Mars, which later succeeded Melbourne as the county seat, was platted in 1869-1870 and its name was made up from the first names of the women in the railroad party who were present at the completion of the Illinois Central Railroad from Dubuque to Sioux City.

Two pioneer physicians in the vicinity of Le Mars in the late sixties were Doctor Wigins and Dr. Stanley, but nothing is known about them.

Dr. Melancthon Hilbert, who located in Le Mars in 1870, is recognized as being the first regular physician in Le Mars. He was born in Ohio about 1845 and later moved to Iowa. He attended academy in Fairfield and studied medicine there with a physician. At an early age Dr. Hilbert enlisted in the Civil War and was a hospital steward. At the close of the war he was graduated from Rush Medical College and later took graduate work at the University of Michigan. In 1868 he was married to Flavia Ingold of North Carolina. In 1870 Dr. and Mrs. Hilbert came to Le Mars, or what was then known as St. Paul Junction, on a construction train from Sioux City.

For a few years Dr. Hilbert was in active practice, but he then gave up his medical work and was engaged for many years in the real estate, insurance, and abstract business. At one time he traveled for the Plymouth Mill. Dr. Hilbert was a commander of Mower Post G. A. R. and mayor of Le Mars in 1884. In 1922 he died at the Soldiers Home in Hot Springs, South Dakota, at seventy-seven years of age. He was a small, energetic man with a pleasing personality.

Dr. W. H. Porter, a graduate of Rush Medical College, came to Le Mars in 1877. Practically all that is known about him is that he served a brief term in the Fort Madison prison for an abortion. Later he returned to Le Mars where he shot and injured the local mayor, Mayor Ball. He then moved to Sioux City where he died a few years later.

Dr. W. H. Ensminger, a graduate of Jefferson Medical College, located in Le Mars in February, 1877. He was a charter member of Mower Post G. A. R. and in 1882 was the post's first surgeon. In 1898 he moved to Chicago, and he died there in 1902.

The names Drs. Hoekett and Hines are always mentioned together and considerable "color" seems associated with these pioneer physicians.

Dr. G. C. Hoekett was born in Richmond, Virginia, and was graduated in 1860 from the University of Virginia and in 1861 from the University of New York. After serving in the medical corps of the confederate army, he was located in Richmond and St. Joseph, Missouri. In 1878 Dr. Hoekett came to Le Mars, where he remained in practice until he died of pneumonia in 1898. He was a stocky Southern gentleman with a dynamic personality, and he enjoyed a large practice. He was the type of physician who thought only of his practice and little of his fees. Dr. Hoekett had been divorced from his wife before he came to Le Mars and many stories are told of his colorful, dramatic career. He is the only confederate veteran buried in the Le Mars cemeteries.

A partner of Dr. Hoekett and a fellow Virginian, Dr. J. W. Hines, came to Le Mars in 1880 when he was about forty-five years of age. He was a graduate of the University of Virginia Medical School. During the Civil War he was first appointed surgeon with Stonewall Jackson's brigade, and he was with Lee at the time of his surrender, being then chief purveyor of the army of north Virginia. Dr. Hines, a bachelor, was a stocky, refined, and capable physician, and he also enjoyed a large practice. He spent the remainder of his life in Le Mars, dying about 1900 at sixty-five years of age. He was buried in his native Virginia.

Dr. Qwidale, a graduate of a medical college in Edinburgh, Scotland, was in Le Mars for a brief time in the early eighties. For ten years prior to

that time he had been ship surgeon on the liner "Gallic".

Dr. Paul Brick was born in Germany in 1846. After graduating in pharmacy there, he came to the United States in 1867. He practiced in Mantown, Illinois, and Parkersburg, Iowa, and then located in Le Mars in 1880. Not being a medical graduate and finding some hostility from his colleagues, Dr. Brick attended medical school at the University of Illinois for one year, graduating in 1890. He then returned to Le Mars where he was a successful physician and an active citizen for many years. He was a portly, jovial man with a sick room personality. He was a great scholar and is reputed to have never refused a call. Dr. Brick died in Sioux City in 1910 at sixty-four years of age. In addition to his other activities, he was surgeon for Illinois Central, First Worthy Patron of Eastern Star in 1888, and First Exalted Ruler of Elks in 1898. Dr. Brick's son, Louis Brick, was a member of the Fifteenth Iowa Infantry in the Spanish American War, and he died in Florida in 1898. The local post of the Veterans of Spanish War is named in his honor.

Dr. W. O. Prasser, a graduate of McGill University Medical School in Montreal, Quebec, Canada, located in Le Mars in 1881. He was a popular, pompous man and was very active in religious circles. For a short time he practiced in Superior, Wisconsin, but he later returned to Le Mars. In 1900 Dr. Prasser moved to the west coast. He died of typhoid fever in Oregon in 1911. Dr. Prasser's wife and children were well known in Le Mars in early days.

Dr. L. Gibbs Clarke, a graduate of Rush Medical College, located in Le Mars in 1882, having previously been prison physician at Fort Madison. He had a large practice in Le Mars and was noted for his ability in caring for diphtheria patients. In 1887 Dr. Clarke moved to Glenwood Springs, Colorado, where he practiced for many years and where he died in 1928. Mrs. Clarke still lives in Colorado.

Dr. Milton H. Richey was born in Polk County, Iowa, in 1854, and he spent his boyhood there. In 1877 he was graduated from the Kentucky Medical School in Louisville. After a few years in Clyde, Iowa, Dr. Richey located in Le Mars in 1881, where he enjoyed a large general practice for many years. In 1878 he was married to Electa Reeves and to this union two children were born—Edna, a teacher in the Honolulu schools, and Floyd, now living in Texas. After the death of his wife, Dr. Richey was married in 1902 to Odessa Harris. Two children were born to this union also—Myrna, Mrs. Robert Brodie of Le Mars, and Alice, Mrs. Walter Lang of Remsen. Dr. Richey retired from active practice a few years before his death in 1931 at the age of seventy-seven years. He was a successful business man and had large land holdings in Plymouth County.

Dr. W. I. Gerish was a native of Germany and located in Le Mars in 1884. He was county physician for many years. After the accidental death of his child from a sleeping powder, he moved to Nebraska and nothing further is known of him.

Dr. A. P. Bowman came to Le Mars about 1884. He had "surgical ambitions" and did some home surgery in those early days. About 1890 he moved to Sioux City where he bought the Drake Sanitarium. Dr. Bowman was a short, rotund, very bald man.

Dr. William Gray came to Le Mars from the state of Washington about 1889, and after ten years of practice, he sold his business to Dr. W. T. Shepard. He then returned to Washington where he was reported to have been very successful.

Dr. Peter Schwind was born in Luxemburg in 1838 and probably had some veterinary training there. He practiced some form of medicine in Jackson County and Dubuque for about twenty years, later locating in Le Mars in 1885. Although without medical education, Dr. Schwind did some practice in a pioneer sort of way. He developed a rose healing salve which is still sold in local drug stores. He was a short, rugged man with a forceful personality. It is related that at one time he ran a saloon in Le Mars. He was a man with much common sense and had considerable ability in caring for fractures. A favorite prognosis ascribed to Dr. Schwind, "Velle, tomorrow he will be better oder he will be worse," or with a shrug of the shoulders, "Oder maybe shoost der same." He seldom was wrong. In 1910, after an amputation of his leg for diabetic gangrene, Dr. Schwind died at seventy-two years of age.

Dr. G. W. Foster (the son of a pioneer Le Mars settler after whom Foster Park and Foster Addition were named) was located in Le Mars for a short time about 1887. While in Le Mars, he was associated with the teaching at Northwestern Normal School which later became Western Union College. No other data is available concerning Dr. Foster, who probably did not practice his profession while here.

Dr. J. C. MacMahon was graduated in 1885 from the St. Paul Medical College. He practiced in Michigan before locating in Le Mars in 1887. He was at one time county coroner and city physician. He later moved to St. Paul, where he died in 1914.

(To be continued next month)

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ATHLETIC INJURIES: PREVENTION, DIAGNOSIS AND TREATMENT—By Augustus Thorndike, M.D., associate in surgery, Harvard Medical School. Second edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, $3.00.

ELECTROTHERAPY AND LIGHT THERAPY—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. Fourth edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, $8.00.

THE 1941 YEAR BOOK OF PHYSICAL THERAPY—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1941. Price, $3.00.

OCCUPATIONAL DISEASES—By Rutherford T. Johnstone, M.D., director of the Department of Occupational Diseases, Golden State Hospital, Los Angeles. W. B. Saunders Company, Philadelphia, 1941. Price, $7.50.

THE 1941 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—Edited by Joseph B. DeLee, M.D., professor of obstetrics, University of Chicago Medical School; and J. P. Greenhill, M.D., professor of obstetrics and gynecology, Loyola University Medical School. The Year Book Publishers, Chicago, 1942. Price, $3.00.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY—By Jerome E. Andes, M.D., director of department of health, University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, $4.00.

CLINICAL ANESTHESIA—By John S. Lundy, M.D., head of section on anesthesia, Mayo Clinic; professor of anesthesia, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota. W. B. Saunders Company, Philadelphia, 1942.

SYNOPSIS OF ALLERGY—By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, $3.00.

A TEXTBOOK OF NEURO-ANATOMY—By Albert Kuntz, M.D., professor of micro-anatomy, St. Louis University School of Medicine. Third edition. Lea and Febiger, Philadelphia, 1942. Price, $6.00.

ENCEPHALITIS: A CLINICAL STUDY—By Josephine B. Neal, M.D., clinical professor of neurology, College of Physicians and Surgeons, Columbia University. Grune and Stratton, New York, 1942. Price, $6.75.

PEDIATRIC GYNECOLOGY—By Goodrich C. Schauffler, M.D., assistant clinical professor of obstetrics and gynecology, University of Oregon Medical School. The Year Book Publishers, Chicago, 1942. Price, $5.00.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES—By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, $4.50.

CARCINOMA AND OTHER MALIGNANT LESIONS OF THE STOMACH—By Waltman Walters, M.D., Howard K. Gray, M.D., and James T. Priestley, M.D., of The Mayo Clinic and Mayo Foundation. W. B. Saunders Company, Philadelphia, 1942. Price, $8.50.

SYNOPSIS OF DISEASES OF THE HEART AND ARTERIES—By George R. Herrmann, M.D., professor of medicine, University of Texas. The C. V. Mosby Company, St. Louis, 1941. Price, $5.00.

THE PATHOLOGY OF TRAUMA—By Alan Richards Moritz, M.D., professor of legal medicine, Harvard Medical School. Lea & Febiger, Philadelphia, 1942. Price, $6.00.

THE ANSWER IS . . . YOUR NERVES—By Arnold S. Jackson, M.D., Madison, Wisconsin. Jackson Publications, Madison, Wisconsin, 1942. Price, $2.00.

BOOK REVIEWS

CANCER OF THE FACE AND MOUTH

By Vilray P. Blair, M. D., Sherwood Moore, M.D., and L. T. Byars, M.D., St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price $10.00.

This work represents the fruit of twenty years of experience in the treatment of malignant conditions involving the face and mouth, paranasal sinuses, and salivary glands.

The name of Blair, one of the earliest pioneers in this field, is sufficient in itself to rank this volume as one of the important publications of the year. Moore has contributed some of the most important developments in radiation therapy of malignant tumors; and the combination of surgical and radiation treatment in the hands of these two men has attained results never surpassed and rarely equalled.

The volume is divided into two parts, either of which would make a worthwhile addition to any medical library. In the first part, after three chapters devoted to general considerations, the various regions of the face and mouth are taken up singly, with numerous photographs illustrating the different types of lesions, the results of surgical and radiation treatment, and the plastic repair. Every possible type of case seems to be represented. While all of the chapters are intensely interesting, I found those on melanomas, adamantinomas and salivary gland tumors particularly informative.

In a chapter devoted to anesthesia, the authors urge caution in the use of opiates because of the danger of suffocation in the postoperative period, and advise against intravenous and rectal therapy, presumably for the same reason.

The second part of the book is composed of drawings illustrating the surgical technic. Practically all conceivable types of sliding flaps, tubed flaps, and free grafts are represented and clearly illustrated. There are also excellent drawings showing the various types of gland dissections, especially of the parotid region of the lymphatic glands of the neck. All the drawings are made from actual cases and give an excellent idea of the extraordinary results which can be obtained by a competent plastic surgeon.

In conclusion, this volume well proves that Dr. Blair has earned the title of Dean of American Plastic Surgery. W. A. K.

CARDIAC CLINICS

By Fredrick A. Willius, M.D., professor of medicine, University of Minnesota Graduate School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, $4.00.

The text is a practical and clear presentation of clinical cases of heart disease. It is replete with individual case histories, examinations, clinical discus-

sions, course and postmortem findings (where applicable).

The author has divided the text to present diseases of the pericardium, rheumatic heart disease, endocarditis, cardiovascular syphilis, hypertensive heart disease, coronary disease, thyroid disease, congenital heart disease, functional states and arrhythmias. A concise chapter on treatment and management is highly commendable.

The volume is an excellent presentation of clinical cardiologic cases which will be valuable to the internist and the general practitioner. J. W. C.

VAGINAL HYSTERECTOMY

By James W. Kennedy, M.D., sugeon-in-chief to the Joseph Price Hospital, Philadelphia; and Archibald D. Campbell, M.D., assistant professor of obstetrics and genecology, McGill University. F. A. Davis Company, Philadelphia, 1942. Price $10.00.

This text reflects the wide and successful experience of these gynecologists with vaginal hysterectomy. The enthusiasm with which they present the merits of vaginal hysterectomy has developed from their personal experience with several thousand cases. The authors discuss this procedure from the viewpoint of two different technics, the clamp method and the ligation method. They emphasize the ease with which vaginal hysterectomy may be executed; the lack of major surgical complications attending the operation; the low morbidity and mortality rates; the superiority of vaginal removal of the uterus as compared to abdominal hysterectomy; and the wide range of cervical, uterine and vaginal conditions best treated by this procedure.

The first portion of the book presents the historic background of vaginal hysterectomy. The following sections deal with the indications for the operation, the postoperative complications and treatment, and the technic for the clamp and ligation methods.

In their consideration of the indications for vaginal removal of the uterus, the authors greatly widen the field for this particular operative procedure. In addition to the ordinarily accepted indications for vaginal hysterectomy, the authors advocate this operation in all cases of prolapse of the uterus, both partial and complete. They prefer to remove the uterus and repair the vaginal walls rather than the more conservative operations, such as the Fothergill or interposition procedures. They have enlarged the indications for vaginal hysterectomy to include the chronically infected puerperal uterus. They are very definite in their contention that the patient with the chronically infected, hypertrophied, lacerated cervix is best treated by vaginal hysterectomy, rather than cervical repair or amputation. In their treatment of malignancy of the cervix, as well as malignancy of the body of the uterus, the authors have adopted vaginal hysterectomy as the procedure of choice for those operable cases. They recommend that cervical polyps occurring in women past forty-five years of age be treated by vaginal hysterectomy rather than by simple curettage to eliminate the danger of future malignancy. It is their contention that prophylactic hysterectomy, that is, the removal of the uterus as a safeguard against future malignancy, should be encouraged. They stress repeatedly the need for removal of the complete uterus in patients presenting lesions such as fibroids, cervical pathology, prolapse, and cervical and uterine polyps, indicating that these lesions may be associated with or in some cases actually forerunners of malignancy.

The remainder of the text is devoted to the description and illustration of the two technics of vaginal hysterectomy; the repair of the cystocele and rectocele; and anatomic considerations and illustrations of uterine prolapse and associated pathology.

This text is deserving of careful exploration by the reader. There are many points of surgical technic brought out in the illustrations which will help the average operator to improve his own technic and dexterity, and to make vaginal hysterectomy a simpler and less formidable procedure. Throughout the text the reader must remember that the views presented are the conclusions these authors have gained from their wide experience with vaginal hysterectomy and that they do not necessarily agree with the views of other gynecologists. The large portion of the book dealing principally with the indications and discussion for vaginal hysterectomy needs complete reorganization, clarification of many statements, and the elimination of much repetition. A. W. B.

DERMATOLOGIC THERAPY IN GENERAL PRACTICE

By Marion B. Sulzberger, M.D., assistant clinical professor of dermatology and syphilology, New York Postgraduate Medical School. The Year Book Publishers, Chicago, 1942. Price, $5.00.

In their second edition of Dermatologic Therapy the authors, while maintaining the same general outline, have revised and rewritten the entire text. Some chapters have been contracted while others have been enlarged upon and more recent information has been added.

The authors have realized that the general practitioner is the clearing house through which the serious skin diseases must come and that also he is expected and often required to handle the less complicated cases himself. Therefore, this text has been designed to be of especial help to him in diagnosis. Only those forms of treatment which can be used by the practitioner are described. Detailed directions for prescription writing are given, and practical procedures are fully explained.

This text serves a very distinct need of the general practitioner and is an improvement on its predecessor. J. W. Y.

THE ANSWER IS . . . YOUR NERVES

By Arnold S. Jackson, M. D., Madison, Wisconsin. Jackson Publications, Madison, Wisconsin, 1942. Price, $2.00.

This small volume of some two hundred pages can easily be read in an evening. It is a most timely book, coming as it does when the stress and strain of living have been aggravated many fold by the turmoil of world conditions. Its purpose is to make people understand how failure to heed ordinary rules for healthful living leads to the development of symptoms which too often are interpreted as organic disease. Every physician sees such patients. Overwork, overanxiety, insufficient relaxation, and excessive indulgence in liquor, tobacco, coffee, patent medicines and the like account for no small part of the underlying causes for which people seek medical advice. Many of these patients are difficult to convince that they are not suffering from goitre, cancer, ulcer, or gallbladder disease.

"The Answer Is . . . Your Nerves" will not only interest the physician himself, but it is an excellent book to recommend to his patients. The easy, readable style couched in simple terms for lay understanding, with illustrations and sample case histories, makes this common-sense book one which the reviewer can heartily endorse for professional and lay consumption alike. L. F. H.

NEW AND NONOFFICIAL REMEDIES, 1942

Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1942. American Medical Association, Chicago, 1942. Price, $1.50.

Perhaps the most important feature of this new volume of New and Nonofficial Remedies is the radical rearrangement it has undergone, which it is believed will make the contents more accessible and therefore more valuable to the physician or other interested readers. Heretofore, the classification of products has been basically that of chemical relationship. The new arrangement is primarily according to therapeutic use, chemical classification being introduced by means of subheadings. In addition, the typographic style has been changed so as to give greater prominence to the products of individual manufacturers. No valuable feature has been sacrificed. The book still fulfills its function of establishing chemical standards for new and nonofficial preparations which the Council has found to be useful or to give adequate promise of usefulness in the treatment or prevention of disease. Its function as a guide to the most recent advances in therapeutics has been greatly enhanced.

Careful examination of the general discussions under the various headings and subheadings shows that the Council has admirably performed its annual task of keeping the text abreast with the progress of medicine. The authoritative and compendious section of the sulfonamide derivatives is an outstanding example; so also is the chapter on vitamins and vitamin preparations for prophylactic and therapeutic use. Equally important though less extensive revisions have been made in such sections as aluminum compounds, dextrose, gonadotropic substances, liver and stomach preparations, ovaries, parathyroid, pituitary, and testes.

Among the newly accepted drugs are: Acetyl-Beta-Methylcholine and the proprietary brand, Mecholyl Chloride, proposed for use by iontophoresis, orally and subcutaneously as a parasympathetic stimulant; Adrenal Cortex Extract for parenteral use in the treatment of Addison's disease or of adrenal insufficiency of other types as well as prophylactically in surgical procedures involving the adrenal cortex; Aluminum Hydroxide Gel with the proprietary brand, Creamalin, for oral use as an adjunct in the treatment of peptic (gastric and duodenal) ulcer; and Normal Human Serum and Normal Human Plasma. Others worthy of mention are: Cyclopropane, another general anesthetic, now included in the U.S.P.; Amylcaine Hydrochloride, another proprietary local anesthetic, and Pernoston Sodium, the sodium salt of the previously accepted proprietary barbital derivative, Pernoston.

The indices of the new volume of New and Nonofficial Remedies are of the same order and plan as in previous editions. A general index lists accepted articles, including those not described. This is followed by an index to distributors in which appear all the Council accepted articles listed under their respective manufacturers. Finally, a bibliographic index is added for listing proprietary and unofficial articles not included in this volume. This includes references to the Council publications concerning each such article as has appeared in *The Journal of the American Medical Association*, Reports of the Council on Pharmacy and Chemistry, Propaganda for Reform, or Reports of the American Medical Association Chemical Laboratory.

SULFANILAMIDE AND RELATED COMPOUNDS IN GENERAL PRACTICE

By Wesley W. Spink, M.D., associate professor of medicine, University of Minnesota Medical School. Second edition, revised and completely reset. The Year Book Publishers, Inc., Chicago, 1942. Price, $3.00.

This is an authoritative textbook on sulfanilamide therapy which will be of value to both the general practitioner and specialist. The physical and chemical properties of each compound is briefly discussed. The major portion of the book deals with the clinical use of the sulfanilamide compounds in all types of infections. Illustrative case reports are given.

Throughout the book emphasis is placed on the correct choice of the sulfanilamide drug, adequate dosage, and careful watch for toxic symptoms. The bibliography which is given for each chapter includes over 800 references. C. F.



Frank P. Winkler, M.D.

President
Iowa State Medical Society
1942-1943

CAT.

The JOURNAL
of the
Iowa State Medical Society

VOL. XXXIII — DES MOINES, IOWA, MARCH, 1943 — NO. 3

IOWA STATE MEDICAL SOCIETY

Organized in 1850

Ninety-second Annual Session

Des Moines, Iowa - April 29 and 30, 1943

Do not fail to register. Registration Bureau — Hotel Fort Des Moines

PROGRAM OF GENERAL SESSIONS

Thursday Morning, April 29

9:00 a. m.
Main Ball Room

Opening Exercises: 9:00-9:15

Greetings—

JAMES A. DOWNING, M.D., President, Polk County Medical Society

Response—

WALTER A. STERNBERG, M.D., First Vice President, Iowa State Medical Society

Address: 9:15-10:00

Coronary Disease: Its Recognition and Management

HARRY L. SMITH, M.D., Associate Professor of Medicine, Minnesota Graduate School of Medicine, Rochester, Minnesota

Recess to Visit Exhibits 10:00-10:15

Address: 10:15-10:45

BRIGADIER GENERAL CHARLES H. GRAHL, State Director, Selective Service System

Address: 10:45-11:15

The Practical Management of Headache

ARTHUR W. PROETZ, M.D., Professor of Clinical Otolaryngology, Washington University School of Medicine, St. Louis, Missouri.

President's Address: 11:15-11:45

FRANK P. WINKLER, M.D., Sibley

Friday Morning, April 30

9:00 a. m.
Main Ball Room

Address: 9:00-10:00

Pelvic Surgery as Related to General Practice

VIRGIL S. COUNSELLER, M.D., Associate Professor of Surgery, Minnesota Graduate School of Medicine, Rochester, Minnesota

Recess to Visit Exhibits 10:00-10:15

Heart Clinic: 10:15-11:15

HARRY L. SMITH, M.D., Associate Professor of Medicine, Minnesota Graduate School of Medicine, Rochester, Minnesota

Address: 11:15-12:00

Blood Banks in Iowa

ELMER L. DEGOWIN, M.D., Iowa City, and CARL F. JORDAN, M.D., Des Moines

SECTIONAL CONFERENCES

Medical Section

Matthew T. Morton, M.D., Chairman

Thursday Afternoon, April 29

Main Ball Room

Social and Medical Aspects of the Boys' Training School at Eldora, Iowa— 2:00-2:30
RALPH E. GRAY, M.D., Eldora
Discussers:
ANDREW W. BENNETT, M.D., Iowa City
FERN N. COLE, M.D., Iowa Falls

Care of the Premature Infant in General Practice— 2:30-3:00
HAROLD E. FARNSWORTH, M.D., Storm Lake
Discussers:
CLARENCE P. PHILLIPS, M.D., Muscatine
ROBERT H. MCBRIDE, M.D., Sioux City

Malaria Epidemic in Iowa— 3:00-3:30
ANDREW W. BENNETT, M.D., Iowa City
Discussers:
MILFORD E. BARNES, M.D., Iowa City
WILLIS M. FOWLER, M.D., Iowa City

Surgery in Medical Emergencies— 3:30-4:00
ANTHONY C. PFOHL, M.D., Dubuque
Discussers:
KENNETH K. HAZLET, M.D., Dubuque
FRANK J. PIEKENBROCK, M.D., Dubuque,

Friday Afternoon, April 30

Intrathoracic Tumors as a Diagnostic Problem— 2:00-2:30
RAYMOND J. HARRINGTON, M.D., Sioux City
Discussers:
BENJAMIN F. WOLVERTON, M.D., Cedar Rapids
ALBERT A. SCHULTZ, M.D., Fort Dodge

Tropical Medicine in Iowa in the Postwar Era— 2:30-3:00
JAMES A. GREENE, M.D., Iowa City
Discusser:
IRVING H. BORTS, M.D., Iowa City

Early Diagnosis and Treatment in Tuberculosis— 3:00-3:30
PAUL O. NELSON, M.D., Emmetsburg
Discusser:
JOHN C. PARSONS, M.D., Des Moines

Body Measurements in Physical Diagnosis— 3:30-4:00
JULIAN D. BOYD, M.D., Iowa City
Discusser:
ARNOLD M. SMYTHE, M.D., Des Moines

Surgical Section

Walter R. Brock, M.D., Chairman

Thursday Afternoon, April 29

South Ball Room

Management of Peptic Ulcers Requiring Surgery— 2:00-2:30
FRANK R. PETERSON, M.D., Iowa City

A Surgical and Clinical Contribution to Right Sided Pain— 2:30-3:00
B. RAYMOND WESTON, M.D., Mason City
Discusser:
HAROLD W. MORGAN, M.D., Mason City

Delayed Bone Grafts— 3:00-3:30
EDMUND S. DONOHUE, M.D., Sioux City
Discussers:
LEWIS M. OVERTON, M.D., Des Moines
ARTHUR STEINDLER, M.D., Iowa City

Surgery of the Colon— 3:30-4:00
JOHN B. SYNHORST, M.D., Des Moines
Discusser:
ERWIN J. GOTTSCH, M.D., Shenandoah

Friday Afternoon, April 30

Management of Acute Cholecystitis— 2:00-2:30
VIRGIL S. COUNSELLER, M.D., Rochester

Use of Sulfonamides in Open Wounds (Clinical Study)— 2:30-3:00
LEWIS M. OVERTON, M.D., Des Moines
Discusser:
KEITH M. CHAPLER, M.D., Dexter

The Use of Stainless Steel Wire as Suture Material— 3:00-3:30
JOHN W. DULIN, M.D., Iowa City
Discusser:
EARL D. MCCLEAN, M.D., Des Moines

Acute Pulmonary Conditions Simulating Abdominal Disorders— 3:30-4:00
CHRISTIAN B. LUGINBUHL, M.D., Des Moines
Discusser:
FRANK W. FORDYCE, M.D., Des Moines



VIRGIL S. COUNSELLER, M.D.
Rochester



HARRY L. SMITH, M.D.
Rochester



ARTHUR W. PROETZ, M.D.
St. Louis

OUR GUESTS



BRIG. GEN. CHARLES H. GRAHL
Des Moines



VIRGIL M. HANCHER
Iowa City

Eye, Ear, Nose and Throat Section

Jay C. Decker, M.D., Chairman

Thursday Morning, April 29

Rooms 317-318

Intra-ocular Neuritis— 9:30-10:00

EARL C. MONTGOMERY, M.D., Atlantic

Discusser:

J. KENNETH VON LACKUM, M.D., Cedar Rapids

Glioma of the Optic Nerve— 10:00-10:30

F. HAROLD REULING, M.D., Waterloo

Discusser:

JAMES E. REEDER, M.D., Sioux City

Main Ball Room

The Practical Management of Headache— 10:45-11:15

ARTHUR W. PROETZ, M.D., Professor of Clinical Otolaryngology, Washington University School of Medicine, St. Louis, Missouri

President's Address— 11:15-11:45

FRANK P. WINKLER, M.D., Sibley

Thursday Afternoon, April 29

Rooms 317-318

Modern Methods in Nasal Therapy— 2:00-2:30

ARTHUR W. PROETZ, M.D., St. Louis

Abnormal Retinal Correspondence— 2:30-3:00

KENNETH C. SWAN, M.D., Iowa City

Discusser:

JOHN H. MATHESON, M.D., Des Moines

Staphylococcic Septicemia, Tonsillar in Origin— 3:00-3:30

JOHN E. ROCK, M.D., Davenport

Discusser:

JOHN H. TAIT, M.D., Des Moines

The Right to Hear (Movie and paper)— 3:30-4:00

DEAN M. LIERLE, M.D., Iowa City

Discusser:

CECIL C. JONES, M.D., Des Moines

House of Delegates

First Meeting, Thursday Afternoon, April 29

3:30 p. m.

The Cabin, Hotel Fort Des Moines

Roll Call

Approval of Minutes of Friday Morning Session, 1942

Reports of Officers

Reports of Committee Chairmen

Memorials and Communications

New Business

Election of Committee on Nominations

Second Meeting (Time and Place to be determined at first meeting)

Roll Call

Reading of Minutes

Report of Committee on Nominations

Election of Officers

Reports of Committees

Unfinished Business

New Business

Announcement of Committees

Adjournment

Annual Banquet

Thursday Evening, April 29

Main Ball Room, Hotel Fort Des Moines

7:00 p. m.

Toastmaster:

WALTER A. STERNBERG, M.D., Mount Pleasant

Introduction of Guest Speakers and Section Chairmen

President's Remarks:

FRANK P. WINKLER, M.D., Sibley

President-Elect's Remarks:

LEE R. WOODWARD, M.D., Mason City

Address:

VIRGIL M. HANCHER, President, State University of Iowa, Iowa City

Social Events and Special Meetings

Wednesday, April 28

Preconvention Golf Tournament and Dinner
Golf and Country Club
Golf—1:00 p. m.
Dinner—6:30 p. m.

State Society of Iowa Medical Women
Younkers Tea Room
6:30 p. m.

Iowa Public Health Association
Hotel Kirkwood
April 27 and 28

Thursday, April 29

Military Surgeons' Luncheon
South Ball Room
12:15 p. m.

Northwestern University Alumni
Green Room
12:15 p. m.

Iowa X-Ray Club
Flamingo Room
12:15 p. m.

Annual Banquet
Main Ball Room
7:00 p. m.
Physicians, their wives and guests

Friday, April 30

Iowa Alumni Association Luncheon
South Ball Room
12:15 p. m.

Iowa Anesthesiological Society
Dining Room 2
12:15 p. m.

Fracture Committee Luncheons and Panel Discussions
12:15 p. m.

These luncheons and panel discussions are sponsored by the Fracture Committee of the Iowa State Medical Society and are open to all members. Doctors interested in fracture work are cordially invited to attend the luncheon discussing the subject they most wish to hear.

Green Room—Fractures of the Surgical Neck of the Humerus
Presented by: Fred L. Knowles, M.D., Fort Dodge
Arch F. O'Donoghue, M.D., Sioux City
Karl R. Werndorff, M.D., Council Bluffs

Flamingo Room—Open Wounds and Compound Fractures
Presented by: Lewis M. Overton, M.D., Des Moines
Douglas N. Gibson, M.D., Des Moines

State Society of Iowa Medical Women

and

AMERICAN MEDICAL WOMEN'S ASSOCIATION—Branch 19

Wednesday, April 28

Younkers Tea Room
Des Moines
Dinner—6:30 p. m.

Business Meeting
Discussion: Status of Medical Women in the Armed Forces

LOCAL COMMITTEES

Clinical Material

Edward W. Anderson
George E. Mountain

Hosts for Guest Speakers

George E. Mountain
Cecil C. Jones
John B. Synhorst

PRECONVENTION GOLF TOURNAMENT AND DINNER

Wednesday, April 28

Des Moines Golf and Country Club

Arrangements have been made for the annual Iowa State Medical Society golf tournament to be held at the Des Moines Golf and Country Club, Wednesday afternoon, April 28, at 1:00 p. m., with dinner at approximately 6:30 p. m. Greens fees will be $1.00; dinner will be $1.25. Due to uncertain transportation situation and question of attendance, it is very important that we know how many we can reasonably expect to attend. Please notify the secretary at your earliest convenience if you will be present. If the tournament seems unwise as the time approaches, a notice will be sent to you to that effect.

John H. Matheson, M.D., President
802 Equitable Building
Des Moines, Iowa

Lawrence D. Smith, M.D., Secretary
1332 Des Moines Building
Des Moines, Iowa

WOMAN'S AUXILIARY

to the

Iowa State Medical Society

Organized May 9, 1929, Des Moines, Iowa

FOURTEENTH ANNUAL MEETING

Headquarters—Hotel Kirkwood

Des Moines, Iowa

PROGRAM

Thursday, April 29

9:00 a. m. Registration

Hotel Fort Des Moines
Hotel Kirkwood

10:00 a. m. Executive Board Meeting, Hotel Kirkwood

For Board Members and County Auxiliary Presidents

7:00 p. m. Banquet—Hotel Fort Des Moines

Friday, April 30

Hotel Kirkwood

9:00 a. m.

Mrs. Frederick W. Mulsow, President, Presiding

Invocation—

REVEREND RAYMOND J. CONLEY, Mercy Hospital, Des Moines

Address of Welcome—

MRS. JAMES A. DOWNING, President, Polk County Woman's Auxiliary

Response—

MRS. WILLIAM S. REILEY, Red Oak, President-Elect

Reading of Minutes—

Announcement of Committees—

Report of President—

Report of State Officers—

Report of Standing Committees—

Introduction of County Presidents—

Announcements—

Report of Registration—

Unfinished Business—

New Business—

Address: The Present Trend of Medical Legislation 11:15 a. m.

RANSOM D. BERNARD, M.D., Clarion

Music— 12:15 p. m.

Iowa Methodist Hospital Glee Club, MRS. LENA HANSON, Director

Adjournment—

PROGRAM

Luncheon

12:30 p. m.

Hotel Kirkwood

Greetings—

FRANK P. WINKLER, M.D., Sibley
President, Iowa State Medical Society

Greetings—

LEE R. WOODWARD, M.D., Mason City
President-Elect, Iowa State Medical Society

Greetings—

JAMES C. HILL, M.D., Newton
Chairman, Advisory Committee to the Woman's Auxiliary

Address: The State Board of Health and the Blood Donor Program

CARL F. JORDAN, M.D., Des Moines

Skit Presented by War Savings Staff—

Presentation of Gertrude Downing Cup—

MRS. JAMES A. DOWNING

Reading of Minutes—

Report of Resolutions Committee—

Report of Nominating Committee—

Election of Officers—

Installation of Officers—

Election of Delegates to National Convention—

Adjournment

Postconvention Board Meeting

3:30 p. m.

This program, social and business, is for all visiting women. All eligible women are urged to become members. Wives of doctors in service are invited.

Suggestions for sight-seeing to points of interest in Des Moines will be available at the registration desk.

Food is expensive; it is unpatriotic to waste it. Upon arrival in Des Moines, please register and make your reservations for luncheon early.

Observations on the Treatment of Diabetes Mellitus*

William H. Olmsted, M.D., St. Louis, Missouri

This paper will involve three aspects of the treatment of diabetes mellitus. The first of these concerns the principles involved or the aims to be sought in managing a patient with this disease. The second deals with the use of modified forms of protamine zinc insulin, and the third presents methods of dietary education which are simple and efficient.

We believe there has been too much emphasis and too much debate upon the amount of carbohydrate in the diet of diabetic patients and too little emphasis upon the diet as it should fulfill the rules for normal nutrition. In a disease which will last a lifetime it is essential first of all that the patient receive a diet which is adequate in protein, minerals and vitamins. All of us, both the sick and well, if we are to attain health to its maximum degree, must be sure that our diets contain the optimum amounts of these nutrients. To obtain these requirements one needs only to follow some very simple and easily understood rules. These rules are just as important to the diabetic person as they are to the normal individual. They include the consumption of the following: A pint of milk or an ounce of cheese each day; two servings of green or yellow vegetables, either fresh or canned; two servings of fruit, one of which should be either citrus or tomato, the latter being considered in this respect a fruit; one or two servings of fresh meat; and an egg a day, or at least two or three a week. In addition to these foods, which are called protective in the sense that they contain vitamins and minerals, there is a group which adds calories as well as minerals and vitamins to our diets. We may call these foods auxiliary foods to the normal diet: Whole wheat or enriched bread; potatoes, white or sweet; corn, either fresh or canned; beans, lima or navy; and whole grain cereal, wheat or oat. Suppose these rules are now applied to a diet for a diabetic individual; Table I shows such a menu, and Table II shows the summary of its nutrient values. The protein is low; it probably should be at least 70 grams for a man, but on the other hand, for a woman it would suffice. The carbohydrate value is 148 grams. If the carbohydrate in the three slices of whole wheat bread were subtracted, the diet still would contain 100 grams. This figure is significant because it shows that if the diet meets the normal requirements of minerals and vitamins it must contain a minimum of 100 grams of carbohydrate. The calories are low, only 1,400, but we will soon show how this is corrected. The calcium content is almost 800 milligrams, and the normal requirement is from 700 to 1,000 milligrams. The iron content is very good. The Vitamin A amounts to 4,700 international units; and ordinarily we consider the normal intake should be 5,000 units of Vitamin A. When fat is added to the diet, the Vitamin A intake will be greatly increased. The 1.69 milligrams of thiamin is sufficient for an active man and 83 milligrams of Vitamin C is well above the normal requirement. Also, 2 milligrams of riboflavin are more than sufficient for the usual active individual. We can say, therefore, that the application of the rules for a normal diet to a diabetic one results in the diet containing the following values: at least 60 grams of protein, 100 to 150 grams of carbohydrate, not over 1,400 calories, a normal intake of calcium and iron, and a high intake of the vitamins. Unless one wishes to reduce the patient, and the foregoing diet is an excellent reduction diet, the calories should be increased to 2,000 or 2,400, the latter figure being the amount which the ordinary man today requires, while 2,000 calories usually suffice for an active woman. Table III shows that when fats are added in amounts which are not excessive and which fit in well with the menu already given, the calories are augmented by 1,000. Also, the butter and cream supply an additional 1,500 international units of Vitamin A. The function of fat is to supply energy requirements for the diet of the diabetic person. Fat is used in the diet to control weight. When there is obesity, fats are strictly limited; but when the diabetic patient is undernourished or needs calories, such as in a case where the pa-

TABLE I

Rules for a Normal Diet Applied to a Menu for a Diabetic Patient.

Morning	Noon	Night
Milk, 1 cup	Ham, 1 slice	Meat, 1 serving
Orange juice, ½ cup	Whole wheat bread, 2 slices	Potato, 1 medium
Egg, 1	Apple, 1	Green beans, ½ cup
Oatmeal, ⅔ cup	Milk, 1 cup	Salad, carrots and peas on lettuce
		Whole wheat bread, 1 slice

TABLE II

Nutrient Values for a Diabetic Diet Following Rules for a Normal Diet.

Protein, 57 grams	Vitamin A, 4,700 international units
Carbohydrate, 148 grams	Thiamin, 1.69 milligrams
Calories, 1,390	Vitamin C, 83 milligrams
Calcium, 770 milligrams	Riboflavin, 1.97 milligrams
Iron, 17 milligrams	

TABLE III

Fats Which Can Be Added to the Diabetic Menu

Bacon	100 calories
Butter	230 calories
Mayonnaise	200 calories
Cream	200 calories
Fat meat	200 calories
Total additional calories	1,030
Vitamin A added	1,500 international units

*Presented before the Wapello County Postgraduate Medical Meeting in Ottumwa, December 22, 1942.

tient is engaged in manual labor, as a farmer or laborer, fat is added in sufficient amounts to meet whatever the calorie needs of the patient may be.

The second aim or purpose in the treatment of diabetes is to preserve the patient's own insulin production. Diabetes can be defined as a state of hypo-insulinism. Eighty per cent of the diabetic individuals have some insulin production of their own. You are well aware that many diabetic persons in the early stages of the disease have an excellent tolerance for carbohydrate, meaning thereby that they themselves are producing some quantity of insulin. As the disease progresses, only too often the patient's tolerance steadily falls and, therefore, his own insulin production has become much less. The index of good treatment in diabetes is the preservation of the patient's own insulin production and, therefore, his ability to use carbohydrate without the need of too much exogenous insulin. When the insulin needed is produced by the patient's own islet cells, it is secreted automatically in proportion to the need and in response to the level of the blood sugar. This automatic feature of the release of insulin into the circulation is of extreme importance and emphasizes the advantage of preserving islet function. Exogenous insulin, or that which is administered through the syringe, must be given at regular intervals during the day and balanced against intake in carbohydrate. If the patient has considerable ability to produce insulin, he can meet the needs for insulin as they occur; and if some of the burden of insulin secretion is taken over by an injection of protamine zinc insulin, which lasts twenty-four hours, the patient's own insulin supply can meet his additional needs.

There is considerable experimental evidence demonstrating the means whereby the islet cells can be protected against degeneration. There are two methods of producing experimental diabetes; first, by complete removal of the pancreas; and second, by the administration of ever-increasing amounts of pituitary extract. The latter method has great advantages over the former in that the pancreas remains intact and its external secretion remains unchanged. Furthermore, since islet cells remain in the body, the effects of diabetes and diabetic control can be studied microscopically. Allen, almost thirty years ago and before the discovery of insulin, showed that partially pancreatectomized diabetic dogs did very well when they were subjected to undernutrition. On the contrary, when they were overfed, the diabetes became worse and the animals' tolerance for carbohydrate steadily fell. In 1939, Young in England showed that animals could be made diabetic by injecting extract of the anterior lobe of the pituitary gland. His animals gradually became diabetic and exhibited all the signs and symptoms of pancreatic diabetes. After the diabetes in his dogs had become well established, Young showed that insulin protected the islet cells against further degeneration. In Toronto, in Dr. Best's laboratory, this same method of producing diabetes was used on rats. This animal can be made diabetic providing a portion of the pancreas is removed. The workers in Dr. Best's laboratory showed that the islet cells in diabetic rats showed hydropic degeneration unless the animals were protected by one of three ways—fasting, a fat diet, or insulin. Recently Lukens, using diabetic cats, has shown very much the same thing; namely, that the islet cells are protected by insulin or by restriction of the diet. The latter observer believes that a high blood sugar content is injurious to experimental diabetes of this kind. All of these experimental observations prove that in three different experimental animals diabetes causes an exhaustion of the islet cells and a resulting cellular degeneration and loss of function unless the diabetic animals are treated by fasting, a fat diet, or by insulin.

Although these experiments are very impressive, nevertheless diabetes in the human being might be said to be different from that of experimental animals so that clinical evidence should be cited supporting the experimental findings in animals. Today there are two schools of thought regarding the treatment of diabetes. One set of clinicians believes it is not necessary to keep the patient sugar-free and control the blood sugar content; but that if the patient remains in excellent condition, retains his weight, and has no signs of acidosis he may be allowed to have considerable amounts of sugar in his urine. On the other hand, for many years most of the clinicians particularly interested in diabetes have held that it is of extreme importance that the patient remain sugar-free and that the blood sugar content be controlled as closely to the normal level as is possible.

I should like to offer some observations of my own which lend support to the belief that to keep the urine sugar-free is essential in protecting the function of the islands of Langerhans. I have the records of approximately one hundred diabetic patients who have been under my observation for a period of at least ten years. Every clinician knows that in spite of his best efforts some diabetic patients do not follow his suggestions and the diet he prescribes, and they therefore have sugar in the urine more or less continuously. On the other hand, he has other patients who are very conscientious about their diet and insulin and keep sugar-free with good control of the blood sugar

content. Thus, in this group of diabetic patients, two-thirds of them have been able to keep sugar-free almost continuously during the ten-year period. The other third have shown sugar in the urine with a high blood sugar content most of the time. In this group of patients the initial doses of insulin needed at the beginning of the ten years was known, as well as that necessary at the end of the period. The amount of exogenous insulin which any diabetic person needs roughly reflects the amount of insulin which the patient is able to secrete from his own islet cells. The more insulin needed, the less is the islet function, and vice versa; the smaller the dose, the more islet function is retained. By subtracting the amount of insulin which the patient had to take at the beginning of the ten years of observation from the dose he took at the end of ten years, we arrived at a rough estimate of the loss of function which had taken place during the ten-year period. In the group of thirty-eight patients who were sugar-free, there was an average increase in the insulin dose of 26 units. On the other hand, the patients who were uncontrolled had an increase in their insulin requirements of 45 units of insulin. Also, in the group of eighteen patients who did not require any insulin at all during the ten-year period, there were sixteen who remained sugar-free against only two who continuously showed glycosuria. There were four in each group who actually had a small decrease in their dose of insulin. This clinical evidence, I believe, is very striking and fully confirms the findings in experimental diabetes. We may conclude that in a human being, just as in experimental animals, if the urine remains sugar-free and the blood sugar content is held below 200 milligrams per cent, the function of the islet cells is protected and retained. On the other hand, those patients who continuously have sugar in their urine lose their islet function to a greater degree than those patients who are well treated.

TABLE IV

Question of High or Low Carbohydrate Diets.

	Low 100 grams	Moderate 120-170 grams	High 200-300 grams
1. Control of Blood Sugar Content	easy	not difficult	difficult
2. Amount of Insulin	small	moderate	large
3. Normal Amount of Nutrients	difficult	easy	easy
4. Attractive Diet	no	yes	yes

There is another question which has been widely discussed; namely, whether high or low carbohydrate diets are best for the diabetic patient. In other words, does a diet high in carbohydrate or one low in carbohydrate best preserve the function of the islands of Langerhans? The answer to this question, if we have been correct in our arguments, will be the answer to the question whether it is easier to control glycosuria and the blood sugar content with a diet high in carbohydrate or low in carbohydrate. In discussing this question there are four important factors. As we have already brought out, it is essential for the diabetic person, first, to receive a normal diet; second, it is important that the liver contain an abundant amount of glycogen; third, there is an advantage in selecting a diet requiring small doses of insulin to keep the patient sugar-free; and fourth, the diet must be attractive, otherwise patients will not adhere to it and in all probability will go frequently on carbohydrate sprees. In Table IV we have attempted to balance these factors. The great advantage of the low carbohydrate diet is that the glycosuria and blood sugar are easy to control and the dosage of insulin is apt to be small. Its disadvantages are that it is difficult to be certain the patient has a normal intake of minerals and vitamins and that the liver glycogen is apt to be low. Also, such a strict diet is one to which patients have difficulty adhering over long periods of time. When we consider the high carbohydrate diet from these points of view we can say that the blood sugar content and glycosuria are more difficult to control and the diet requires higher doses of insulin. On the other hand, it is easier to give normal amounts of minerals and vitamins, the liver is apt to have an abundant glocogen supply, and it is a diet to which patients adhere since it is so generous in carbohydrate that there is no reason to break it. Consideration of the pros and cons of these factors results in our taking the middle ground between the low and the high carbohydrate diet. We believe the diet should contain at least 120 grams of carbohydrate and, except in an emergency, should not contain more than 170 grams.

REDUCTION OF OBESITY

There is almost complete unanimity of opinion regarding the need of reduction for the obese diabetic patient. Some of the reasons which can be cited concerning the necessity for this are: First, after reduction the diabetic patient will probably need less insulin than he did before; second, there will be a great deal less strain on the cardiovascular system since lowering the weight reduces the work of the heart; and third, which is the most important reason, the diabetic person with normal weight or slightly less than normal will live longer than the obese diabetic individual.

PREVENTION OF ARTERIOSCLEROSIS

The fourth aim or purpose which we must always keep in mind in treating our diabetic pa-

tients is, if possible, to reduce the occurrence of arteriosclerosis, or, perhaps it should be more correctly stated, to prevent a premature development of arteriosclerosis. Joslin states that of the 5,000 deaths included in his records, 60 per cent were due to cardiovascular disease. As Joslin so aptly says, diabetic patients today do not die so much of diabetes as they die with it, meaning that the complications of the disease kill the patient and not the disease itself. Is there any evidence that we can prevent the premature arteriosclerosis in diabetes? I have already mentioned the one hundred diabetic patients whom I have had under observation for at least ten years. From time to time the clinical evidences of arteriosclerosis have been noted and recorded. We have analyzed the clinical evidences of arteriosclerosis in these patients as it was recorded in the physical examination, x-ray film, and electrocardiogram. We were completely unable to correlate the severity of the disease or the completeness of the control of the diabetes with the occurrence and development of arteriosclerosis. In other words, the patient with a mild diabetes had just as much or more arteriosclerosis than the one with a severe diabetes, and those patients who were adequately controlled developed signs of arteriosclerosis as often as the patients showing constant glycosuria. When these facts became evident, we were keenly disappointed because we felt there should be some correlation between the adequacy with which diabetic patients are controlled and the development of arteriosclerosis. However, it must be remembered that this study was made of adults. In children, Dr. Boyd of the State University of Iowa has come to the conclusion that there is a very definite relationship between the adequate control of the diabetes and the development of premature degeneration of the eyes, stunted growth, and premature arteriosclerosis. Eisele lately has recorded the evidences of arteriosclerosis in juvenile diabetic patients who have been under observation for twenty years. Thirty per cent of them had roentgenologically visible arteries of the extremities, and 55 per cent showed retinal arteriosclerosis. I think this evidence is far more important than the failure to find evidence among adult patients, because the great majority of diabetic patients develop their disease in that period of life when arteriosclerosis is manifest. Children, however, should not show clinical signs of arteriosclerosis, and yet there is some evidence that in the poorly treated cases this condition occurs. In conclusion, therefore, we can say that in juvenile diabetes premature arteriosclerosis does occur and that in all probability there is a direct relationship between its prevention and successful diabetic control.

THE USE OF NEWER FORMS OF INSULIN

You are all familiar with protamine zinc insulin. Everyone knows that it is extremely slow acting and its effects are distributed over twenty-four hours or more. If the patient has enough insulin secretion of his own to take care of the carbohydrate ingested during the day, one dose of protamine zinc insulin will suffice to control his disease adequately. On the other hand, if he has a moderately severe or severe diabetes, he will need doses of rapidly acting insulin during the day to take care of the added load at that time. It must always be remembered that protamine zinc insulin is insoluble so that when it is injected into the subcutaneous tissues the reactions occurring about the pool of protamine zinc insulin act upon it and dissociate the insulin from the protamine. Probably the protamine is destroyed and the insulin is freed in this manner. If one injects too large amounts of protamine zinc insulin, the liberation of insulin takes place at a very irregular rate and results in either glycosuria or severe insulin shock. Most clinicians, therefore, do not inject more than 40 units of insulin into one depot. A type of insulin which has both the character of crystalline insulin and of protamine zinc insulin is needed; in other words, an insulin which not only acts quickly but also has a slow delayed action. To meet this situation there are several new forms of insulin. I have had no experience with either globin or histone insulin, two of the newer forms, but the published results of other observers are not very encouraging.

Colwell of Chicago last year suggested mixing protamine zinc insulin and crystalline insulin. He tried several such mixtures; for instance, equal parts of protamine zinc and crystalline insulin, or two parts of crystalline to one part of protamine zinc insulin, and last, three parts of crystalline to one part of protamine zinc insulin. Of these mixtures he found the one which acted the best was two parts of crystalline to one part of protamine zinc insulin. MacBryde of St. Louis has been carrying on similar experiments. In his experience the best mixture of protamine zinc and crystalline insulin is equal parts of each. His results seem to show that there is a quick release of insulin following the injection, as well as a slow release lasting twenty-four hours. This feature of the mixtures of the two insulins seems to be what we are looking for. Of equal importance is the fact that one is enabled to inject larger amounts into one depot. Both Colwell and Mac-

Bryde have found this to be true and they have injected as much as 80 units into one subcutaneous area.

I have the permission of Dr. MacBryde, who has charge of the Metabolism Ward in Barnes Hospital, to give you his results in some detail. He finds that histone insulin, one of the new forms of slow-acting insulin, does not control the blood sugar content as well as protamine zinc insulin. When mixtures of protamine zinc insulin and crystalline insulin are put together in equal amounts, the resulting mixture controls the blood sugar content better than when protamine zinc insulin and regular insulin are used in separate injections. If a physician wishes to use these forms of protamine zinc insulin which contain less protamine, all he need do is remove the protamine zinc insulin from a bottle into a large syringe and then remove the crystalline insulin from another bottle and mix the two, returning the mixture to the bottles. Colwell uses a mixture of two parts of crystalline insulin to one of protamine zinc insulin, and in some cases I have found this mixture to be most useful. When one mixes equal parts of protamine zinc insulin and crystalline insulin as MacBryde has recommended, the resulting mixture contains one part of soluble, quickly absorbed insulin to three parts of protamine zinc insulin. The reason for this is that the protamine zinc insulin which is now on the market has an excess of protamine so that when crystalline insulin is added some of the crystalline insulin is precipitated as the protamine zinc form. From my personal experience in using mixed forms of insulin on a few patients, I believe that in the near future there will be almost universal use of a form of protamine zinc insulin which contains about half the amount of protamine present in the protamine zinc insulin now on the market, and that the use of this new form of insulin will result in better control of the blood sugar than has been previously possible.

METHODS OF DIETARY EDUCATION

To keep the diabetic individual sugar-free week after week and year after year, quantitative dietetic education is second in importance to insulin. The quantity of carbohydrate which the diabetic person consumes must be carefully measured, and the more severe the disease the more important this duty becomes. Next to the use of insulin, the methods by which we educate our diabetic patients to measure their diets will determine the success we achieve in keeping them sugar-free. The usual method employed by the clinician is to teach the patient to weigh his diet in grams. He is told that he should eat so many grams of 4 per cent vegetables, so many grams of 10 per cent fruit, so many cubic centimeters of milk and so many grams of meat. There can be no doubt that the metric system of measuring food is extremely accurate; however, there are several important practical considerations which cast serious doubt on the use of the metric system as the sole method of teaching diabetic individuals to measure the diet. It makes little difference whether the diabetic patient is a child, a woman, or a man, it is the woman who must prepare the diet. To prepare the diabetic patient's diet, it is the woman then who must learn the metric system and what is meant by percentage. Even if she has had a college education, the woman must again learn the metric system and she must learn the meaning of percentage because she has had no experience using these terms. In order to teach her how to calculate and weigh out the diet, it is the custom to send the patient to the hospital so that the home dietitian can learn from the hospital dietitian the technic of calculating and weighing the diabetic patient's menu. This frequently takes several weeks of time. It means that if we properly educate our diabetic patients they must be hospitalized. As a matter of fact, at least two-thirds of the the diabetic patients are not sick enough to warrant hospitalization and many of them should be handled in the doctor's office. In our experience, the metric system is so difficult for the average woman to thoroughly understand that as time goes on she becomes lax in measuring the diet, and the result is that the dietary instructions are not followed and sooner or later the diabetic patient is showing sugar because of neglect in carrying on daily dietetic arithmetic. If we had a more simple system of measuring food, a system which every woman could understand, the quantitative measurements of a diet would be easier and more persistently and conscientiously followed. If one opens a standard cookbook, the answer to our problem is found in its pages. When any recipe is followed, the cook is told to measure the ingredients in cupfuls, in tablespoonfuls or in teaspoonfuls. In any American kitchen is found a standard measuring cup which is one-half pint; the cup being divided into fourths and thirds. Here is a system of measurement with which the woman is thoroughly familiar. Could we use it in teaching her to measure a diabetic person's diet? Since 1927 I have been teaching my diabetic patients to measure their diets with a measuring cup, and I have stated the carbohydrate values as so many teaspoonfuls of sugar. She is told, for instance, that one cupful of milk is equal to three

teaspoons of sugar; that one slice of bread, such as is sliced by a mechanical slicer, is equal to three teaspoons of sugar; that one cupful of green beans is equal to one teaspoon of sugar; or that a half cup of cooked tomatoes equals one teaspoon of sugar. Tables are given her which show the sugar values of all the carbohydrate foods. She is told that for each meal the patient must eat foods equivalent to a given number of teaspoonfuls of sugar. The foods are measured in the standard cup in amounts given in the tables. Usually this amounts to from ten to fourteen teaspoons of sugar per meal, which would amount to a total carbohydrate value of from 120 to 170 grams per day. This system has these advantages: first, as has been already said, it makes use of a measuring method with which the average woman is thoroughly familiar, and second, which is still more important, it emphasizes the total sugar value of the food. If we use the metric system, we give the patient tables of foods which are labeled 4, 10, and 20 per cent carbohydrate. The home dietitian is told to weigh out so many grams from each group. This lays emphasis on the grouping of the food rather than on the actual carbohydrate value, and unless percentage is very thoroughly understood, confusion results and the less informed individuals believe the foods allowed are found in certain groups or in certain lists of the diet. It is small wonder, therefore, that in order to educate the woman in the metric system it takes a considerable period of dietary schooling.

TABLE V

Foods Which Have So Little Sugar Value That It Need Not Be Counted

Artichokes	Greens:	
Asparagus	Beet	Lettuce
Broccoli	Dandelion	Rhubarb
Okra	Kale	Summer Squash
Cauliflower	Mustard	Mushrooms
Celery	Turnip	
Cucumber	Endive	
Ripe Olives	Spinach	Pickles

TABLE VI

Amounts of Food Equal to One Teaspoonful of Sugar (4 grams)

Beans, green snap, cooked 1 cup	Radishes, raw, 1⅓ cups
Blackberries, raw, ½ cup	Sauerkraut, 1 cup
Brussels sprouts, cooked 1 cup	Strawberries, raw, ¾ cup
Cabbage, raw, 1 cup	Squash, winter, cooked, ½ cup
Cabbage, cooked, 1 cup	Tomatoes, raw, ¾ cup
Carrots, diced, ½ cup	Tomatoes, cooked, ½ cup
Carrots, cooked, ½ cup	Tomatoes, juice, ½ cup
Cantaloupe, ½ cup	Turnips, cooked, 1 cup
Cocoa, dry, 8 teaspoons	Flour, 2 teaspoons
Cranberries, cooked, 1⅓ cups	Tapioca, 1½ teaspoons
Eggplant, cooked, 1½ cups	Cornstarch, 2 teaspoons
Gooseberries, cooked, 1⅓ cups	Vanilla wafer, 1
Kohlrabi, 1 cup	Watermelon, ½ cup
Lemon juice, ½ cup	

TABLE VII

Amounts of Food Equal to Two Teaspoonfuls of Sugar (8 grams)

Apricots, fresh, 2 medium	Pear, raw, 1 medium
Beets, cooked, ⅔ cup	Plum, raw, 1½ large
Blueberries, raw, ½ cup	Pumpkin, cn. or ck., ⅔ cup
Grapefruit, ½ medium	Raspberries, raw, ¾ cup
Grapefruit juice, ½ cup	Rutabagas, cooked, ½ cup
Onions, raw, ¾ cup	Saltines, 4
Onions, cooked, ¾ cup	Ritz crackers, 2
Peach, raw, 1 medium	Rye Crisp, 2

TABLE VIII

Amounts of Food Equal to Three Teaspoonfuls of Sugar (12 grams)

Apple, raw, 1 small	Orange juice, ½ cup
Applesauce, ½ cup	Parsnips, cooked, ½ cup
Bran flakes, ½ cup	Peas, canned or ck., ⅔ cup
Bread, thin sl., any kind, 1 slice	Pineapple, fresh gr., ½ cup scant
Cherries, raw, 25 small	Ralstons, dry, 2 tablespoons
Cornflakes, ¾ cup	Ralstons, cooked, ½ cup
Cornmeal, dry, 2 tablespoons	Rice, dry, 1½ tablespoons
Cornmeal, cooked, ½ cup	Rice, cooked, ½ cup
Cream of wheat, dry, 2 tablespoons	Rice flakes, ¾ cup
Cream of wheat, cooked, ½ cup	Rice, puffed, 1 cup
Grapes, Concord, fresh, ½ cup	Wheat, Shredded Biscuit, ½ biscuit
Grapes, Concord, cooked, ½ cup	Graham crackers, 2
Nectarines, raw, 2 medium	Wheat flakes or Wheaties, ¾ cup
Oatmeal, dry, 3 tablespoons	Wheat, puffed, 1 cup
Oatmeal, cooked, ½ cup	
Orange, 1 small	

Tables V to VIII show our classification of carbohydrate foods as arranged on the basis of measuring the foods with a measuring cup and considering their values as so many teaspoons of sugar. The actual basis of these values was determined in 1940 by Williams, Wicks, Bierman and myself by analyzing the vegetables and fruits which the diabetic patient commonly uses. We found that the actual *available* carbohydrate, meaning by that term the sugar actually available to the body, is considerably lower in many of the vegetables and fruits than is commonly thought. For instance, you will see that our initial list contains certain of the watery vegetables and the heading indicates that these foods have so little sugar value that it need not be counted. Our analysis showed that these watery vegetables contain only 1 per cent of sugar; that is, the sugar actually available to the body. Ordinarily the leafy vegetables are stated in the hand books for diabetic patients as containing 3 per cent of carbohydrate. The reason for the discrepancy between our analysis and those commonly given is the fact that such vegetables contain a large percentage of carbohydrate that is not available to the body. This is in the form of cellulose and hemicellulose. Since these watery vegetables contain only 1 per cent of sugar, one can readily appreciate that the average person will hardly consume an amount which will be of any importance from the standpoint of total carbohydrate intake. But, let me point out that these are the foods which contain an abundance of the minerals and vitamins that are so important in normal nutrition. The fact that they do not contain enough carbohydrate to count should stimulate the diabetic individual in their use.

In addition to telling the patient how many teaspoons of sugar in the form of carbohydrate foods he should have at each meal, I give him an outline of the amount of meat and fat that he should have in addition. The meats are divided into those which are fat and those which are lean, and the fat meats are used when one wishes the patient to have fat calories, whereas the lean meats are used

when the calories are restricted. It is obvious that this simple method of diabetic education can be used successfully in the office of the physician, and the patient can be educated in a few minutes. It is important, however, to follow up and see whether he actually grasps what has been taught him. To that end the patient is given a book of instructions containing blank pages on which he records every day the diet which he consumes and for which he has measured and counted the carbohydrate value. This he brings with him when he returns and the physician goes over his menus and calculations to see first whether he has eaten the proper nutrients which make up a normal diet, and second whether he has been correct in his measurements and calculations. It is very satisfactory to use such a simple method, and patients have responded to it enthusiastically. I believe that such simple methods result in patients keeping to their diet and persisting in measuring their diets over long periods of time. It has been our custom to ask every patient when he returns how many teaspoons of sugar he has each meal and to note whether or not his reply is prompt. If he has become lax, I insist that he again record his diet in his notebook for a period of time until he is proficient in the knowledge of the values of carbohydrate foods.

SUMMARY

We believe that if the diabetic patient receives a diet which fulfills the requirements for calories, minerals and vitamins, if he is kept sugar-free, and if the obese diabetic patient is reduced, we will prevent the premature development of arteriosclerosis, and that such patients will live approximately as long as anyone else. Our experience with forms of protamine zinc insulin which contain less protamine leads us to believe they are better adapted to the treatment of the disease than the forms of protamine zinc insulin now in use. Finally, the success of the dietetic management of diabetic patients depends a great deal on the methods of dietetic education, and our experience leads us to the conclusion that simple methods, making use of the measuring cup found in every kitchen, result in better control of the diet than the use of the metric system in spite of the undoubted accuracy of the latter method.

3720 Washington Boulevard.

HOTEL RESERVATIONS should be made early for the annual meeting since there is a shortage of hotel rooms in Des Moines.

PANEL DISCUSSION ON PROPHYLACTIC PROCEDURES*

Lee Forrest Hill, M.D., Chairman

James E. Dyson, M.D. Charlotte Fisk, M.D.
Arnold M. Smythe, M.D. Carl F. Jordan, M.D.

Chairman Hill: As you all know, advancements in medical science in recent years have been rapid and tremendous; and not the least of these advancements by any means have been in the field of disease prevention by specific immunization procedures. For this reason your program committee felt it would be worthwhile to arrange for this evening a program in which the present status of the more commonly used of these procedures was reviewed. Obviously, in the time allotted only a few of the high spots can be presented by the members of the panel. However, there will be shown first a colored motion picture, entitled "Immunization Procedures," prepared by the University of Michigan Medical School at Ann Arbor. It covers all the diseases for which active or passive immunization is practicable. Following its showing the panel members will discuss active immunization against diphtheria, smallpox, scarlet fever, whooping cough, tetanus, typhoid fever, Rocky Mountain spotted fever and typhus fever.

Dr. Dyson, will you lead off with your discussion on diphtheria prevention?

DIPHTHERIA PREVENTION

James E. Dyson, M.D., Des Moines

In order to lessen the reaction of the diphtheria toxin injected into horses used to produce antitoxin, Theobald Smith mixed antitoxin with the toxin in 1907. von Behring used such a mixture of toxin-antitoxin in man in 1913, but it was not until 1922 that William Park of the New York Health Department began immunization to any extent. The first diphtheria toxin was neutralized by horse serum antitoxin. It was soon discovered that this small amount of horse serum sensitized many persons to horse serum. This was rather serious since it made the later administration of horse serum cause serum disease. This was remedied by using sheep serum antitoxin to neutralize the toxin. This toxin-antitoxin mixture immunized 85 per cent of those receiving it.

Ramon in 1923 used formalin to detoxify the toxin and thus produced a toxoid without either horse or sheep serum. Toxoid was used in 1 cubic centimeter amounts and two injections were found to produce a 90 per cent immunity, while a third injection would raise this percentage of immunity to 95 per cent.

In 1926 Wallace and Barr found that the diphtheria toxin could be detoxified by precipitation by alum. Injections of the alum-precipitated toxoid

*Presented before the Polk County Medical Society in Des Moines January 20, 1943.

produced a good percentage of immunity by only one injection, and 97 to 98 per cent when two injections were given. It is the best preparation to use in clinics because of the high percentage of immunity by the smaller number of injections. It has some disadvantages in private practice since the alum-precipitate remains in the tissues at the site of injection for some time and produces a lump, frequently redness, and occasionally a sterile abscess.

At present the recommended procedure is to give every nine month old child either three injections of Ramon toxoid (½ cubic centimeter, 1 cubic centimeter, and 1 cubic centimeter) at intervals of three weeks, or two 1 cubic centimeter injections of alum-precipitated toxoid at intervals of four weeks. Another possible method is to give 1 cubic centimeter of alum toxoid followed in one month by 1 cubic centimeter Ramon fluid toxoid. Six months later these infants should have a Schick test, and those showing a positive reaction should have the toxoid injections repeated. It is not as necessary to use a Shick control in these infants as in older individuals, since there are very few false positive reactions in infancy. It is not necessary to do a preliminary Schick test in infants; practically all children of this age need protection. In private practice it is well to repeat the Schick test when the child is about five or six years of age. A small percentage of those immunized in infancy may lose their immunity in five years and need more inoculations.

In public health work, where it is desirable to have a high percentage of the child population immunized, it is recommended that another toxoid injection be given children at five years of age without Schick testing. If over 50 per cent of the children of a community are immunized, we are assured that no epidemic can occur. Immunization of a community has brought up some new problems. Where there are less diphtheria cases there will be less opportunity for development of natural immunity, such as has occurred in the past by minor infections. From now on those who are not immunized in early childhood will remain susceptible all their lives and be endangered by the disease in later years. Thus, there will be more adult cases. It is becoming increasingly more dangerous not to be immunized.

American Urological Association Cancels Annual Session

Announcement has been made of the cancellation of the Research Prize and the annual meeting of the American Urological Association which was scheduled to be held in St. Louis in June.

IMMUNIZATION PROCEDURES FOR SMALLPOX AND SCARLET FEVER

ARNOLD M. SMYTHE, M.D., Des Moines

SMALLPOX

The smallpox record in Iowa is disappointing. Our yearly average for the past ten years has been 593 cases. During 1937, 1938, and 1939 the thousand mark was passed. A rapid decline in reported cases occurred during the last three years: there were 412 cases in 1940; 114 cases in 1941; and 25 cases in 1942. Whether or not this means a lull before the storm, time will answer.

A few years after Jenner announced his scientific method of immunizing against smallpox, Thomas Jefferson (1802) congratulated him on his achievement and expressed hope that the dreaded disease would soon cease to exist. We are far from accomplishing Jefferson's goal.

The use of calf vaccine virus is still recommended as best. Goodpasture and Rivers have artifically grown the virus and have obtained good immunizing results. The method of choice for vaccination is the multiple acupuncture method. Place a drop of vaccine on the prepared skin, and with a sterile needle make twenty to thirty punctures not deep enough to draw blood. The United States Public Health Service recommends this method to be used routinely. Other methods, such as the intradermal, crisscross scratch, and scarifying methods are still used.

The only way in which smallpox may be safely handled is to immunize the child during infancy and revaccinate when he enters school. Infants may be vaccinated as soon as the cord is off. The earlier the vaccination the less the reaction will be. The reactions are characteristic. The primary type passes through the stages of maculation, papulation, vesiculation, pustulation, and scabbing, and requires twenty-one days to complete the reaction. Maculation occurs about the fourth day and the height of the reaction occurs around the seventh to tenth day.

The accelerated or vaccinoid reaction goes through the same stages as the primary type, but its course is completed in about four to seven days. The local skin reaction is negligible and the constitutional symptoms are wanting. Frequently the stage of pustulation never occurs. This type of reaction probably denotes the individual did not have complete immunity.

The immune reaction, or reaction of immunity, consists of some local induration, redness, and occasionally vesicles appear. This occurs within twenty-four hours after vaccination. This type of immunity indicates the individual has immunity

and probably will not contract smallpox. This reaction should be read within thirty-six to forty-eight hours.

Some children are vaccinated many times without a reaction. This, however, does not denote immunity. Failure means impotent vaccine or an error in technic. Children with chronic skin diseases such as eczema should be vaccinated only when exposed.

The only sure way of conquering smallpox is to vaccinate early and revaccinate when the child enters school.

SCARLET FEVER

Scarlet fever may be controlled by immunization. This disease is caused by one of the group of hemolytic streptococci, and it is no respecter of age. Scarlet fever hemolytic streptococci will not immunize against other hemolytic streptococcal infections, such as erysipelas and septic sore throat. The disease usually produces lasting immunity, although second and third attacks have been reported and relapses occur occasionally.

Scarlet fever is contracted by coming in contact with some individual who has the disease, with or without a rash, or an immune carrier. The idea that the scales are infectious has been disproved.

Active immunity is established by having the disease, or by receiving subcutaneous injections of sterile scarlet fever toxin. Infants have a negative Dick test at birth if the mother is immune, but this immunity disappears during the first year of life. If the mother has a positive Dick test, the infant also will have a positive test at birth.

There have been several methods advocated to produce active immunity, such as the oral, intranasal, inunction, intracutaneous, and the Dick subcutaneous methods. The latter gives the best results. The Dick method consists of five subcutaneous injections at weekly intervals. The doses are graduated: the first contains 650 skin test doses; the second 2,500; the third 10,000; the fourth 30,000; and the fifth 100,000 to 120,000. According to Dick and Dick, "The skin test dose of scarlet fever toxin is the amount which gives positive reactions in persons susceptible to scarlet fever and negative reactions in persons immune to the disease."

The question of how to control the severe reactions which occur from the immunizing injections is always asked. It is important to determine the sensitivity of the individual to the scarlet fever toxin since this varies in each case. First, give the patient a Dick test and note the intensity of the reaction. If the pink area is thirty millimeters in diameter, give the patient one-half the first dose; then one week later begin the regular immunizing course. If the reaction is greater than thirty millimeters, give one-fourth of the first dose and then one week later begin the regular course.

The technic of the Dick test is very important since the amount of toxin used is very small and may be altered. Syringes and needles should be boiled in alkaline tap water since other disinfectants will interfere with the test. Remove all water from the syringe and needle to prevent dilution of the toxin. Give the test intradermally. Correct interpretation of the test is also important. Do not confuse it with the Schick or Mantoux test in which edema is present. The Dick test consists of a pink area varying in size and intensity, and induration or edema is not present. The test should never be read before eighteen hours or after twenty-four hours (The best time is between twenty and twenty-four hours.) since it will be unreliable. A flushed or red area is a positive test and indicates the individual is susceptible to the disease. According to the Committee on Therapeutic Procedures for Acute Infectious Diseases and on Biologicals of the American Academy of Pediatrics, "If there is an area of redness 0.5 centimeter or larger, the test is positive and denotes susceptibility."

Two weeks after the last immunizing injection, give another Dick test, and if this should be positive repeat the fifth injection. Immunity will develop in over 90 per cent of the cases and will last over twelve years in 90 per cent of the cases.

ACTIVE IMMUNIZATION FOR PERTUSSIS

Charlotte Fisk, M.D., Des Moines

It is generally conceded that there is no natural immunity to pertussis. The mother does not transmit any immunity to the child and newborn infants are extremely susceptible to whooping cough. One attack usually confers a lifelong immunity, although second attacks of whooping cough have been reported.

Active immunization for pertussis has been carried out through the administration of vaccines prepared from phase 1 strains of the Haemophilus pertussis. Although these reports are conflicting, the consensus of opinion is that whooping cough vaccine confers complete protection on some and partial protection on others.

Miller and Faber[1] report on the use of pertussis vaccine in a test group of 211 children and a control group of 183 children. In the vaccinated group twenty-six of the children were exposed to whooping cough and seven developed the disease. In the control or unvaccinated group there were

twenty-five exposed children of which twenty-two developed whooping cough. The rate of communicability of the control group was 88 per cent and that of the test group 27 per cent.

Kendrick,[2] on the basis of a study including approximately 2,000 vaccinated children and an equal number of controls, found the rate of communicability for the vaccinated group to be 13.5 per cent and 75 per cent for the control group. Furthermore, it was felt that the vaccinated children experienced milder attacks of whooping cough than the unvaccinated children who developed the disease.

In a later study Rambar, Howell and Goldman[3] found the rate of communicability for a vaccinated group to be 15.5 per cent as compared with 78.7 per cent in an unprotected group. They also recommended revaccination after a two year period.

The most adverse report in the literature on the value of pertussis vaccine is the work in Cleveland by Doull, Shibley and McClelland.[4] In a group of 482 vaccinated children 61 developed whooping cough. Seventy-one of the control group of 496 infants developed the disease.

Sauer[5] has used pertussis vaccine extensively for active immunization. He has found whooping cough seven times more frequent in children vaccinated before three months of age than in children vaccinated after seven months of age. No deaths from whooping cough were reported in the group of children who had received pertussis vaccine.

Coppolino[6] states that immunity following whooping cough vaccine probably occurs within two months and may last three to four years. In a clinical study based on 152 patients receiving pertussis vaccine and 160 controls, six children in each group were exposed to whooping cough. All the unvaccinated children, but none of the vaccinated children, developed whooping cough.

Singer-Brooks[7] made a comparative study of the value of an undenatured bacterial antigen and phase 1 Haemophilus pertussis vaccine in preventing whooping cough. The rates of communicability for the undenatured bacterial antigen group and the control group were 86.6 per cent and 85.8 per cent, while that of the group protected by phase 1 vaccine (eighty billion bacilli) was 7.8 per cent.

Recently, the use of combined vaccines has been advocated. Schütze[8] found in experimental work with laboratory animals that alum-precipitated diphtheria toxoid and pertussis vaccine are compatible. The combined product is followed by high titers for both antigens; the effect of each antigen is enhanced rather than impaired. Miller and Saito[9] found higher levels of agglutinins in children who had received two injections of alum-precipitated diphtheria toxoid with pertussis vaccine than with either two injections of fluid toxoid or pertussis vaccine alone.

Lapin[10] reported the combined immunization for diphtheria, tetanus and pertussis. In a group of 78 infants six to nine months of age, the combined injection was followed by high antitoxin levels for both diphtheria and tetanus. The value of the pertussis vaccine will depend upon the incidence of this disease after a period of observation. There were no allergic reactions in this group. Local reactions and fever were reported in 20 per cent and a "cold" abscess occurred in only one patient.

During the past six months children attending the Well Baby Clinics in Des Moines have received pertussis vaccine. In one clinic either the regular pertussis vaccine or a combined alum-precipitated-pertussis-diphtheria toxoid has been used. Local reactions occurred in approximately one-third of the group receiving pertussis vaccine but in only one-tenth of the group receiving the combined product. However, in two-thirds of the group who received combined antigen a local lump appeared which lasted for several weeks. Eleven children, or approximately 20 per cent, developed a "cold" abscess.

Daughtry-Denmark[11] obtained complete complement-fixation tests following the use of whooping cough vaccine. In a group of 600 patients with the 4 plus complement fixation test no cases of whooping cough developed. However, in a group of 292 school children who did not receive vaccine, 174 developed whooping cough. In this study, two brothers received whooping cough vaccine; the older brother developed 4 plus complement fixation titer and the younger brother a 1 plus reaction. After the same exposure three months later, only the younger brother developed whooping cough.

The opsonocytophagic test has been used by Kendrick[12] and Rambar, Howell and Goldman.[13] This test indicates the opsonizing antibody of the serum as well as the phagocytosing power of the leukocytes. The values were increased during and after the vaccination.

Miller and Silverberg[13] demonstrated agglutinins in higher titers and for greater duration after the injection of whooping cough vaccine than after an attack of the disease.

These tests are not practical procedures since they require laboratory facilities. A rapid agglutination test, done with a drop of blood, has been advocated. It is felt that the presence of agglutinins are an indication of effective artificial immunization for pertussis.

A satisfactory skin test for immunity has not

been developed.[14] From the many contradictory reports in the literature the skin test is of equivocal value.

The majority of reports in the literature indicate that pertussis vaccine is of definite value in reducing the incidence and severity of whooping cough. The following procedures are recommended:

1. Use of phase 1 pertussis vaccine; total dosage of eighty billion bacilli given usually in three injections at intervals of three weeks. Or,

2. Use of combined diphtheria toxoid and pertussis vaccine; from two to three injections at intervals of four to eight weeks are suggested.

3. Active immunization for pertussis to be instituted in children after they have become seven months of age.

4. Revaccination (one injection) two years after the initial vaccination has been advocated by a few investigators.

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ACTIVE IMMUNIZATION AGAINST TETANUS

Lee Forrest Hill, M.D., Des Moines

The value and dependability of active immunization against tetanus by fluid toxoid or alum-precipitated toxoid has been established beyond question. The experience of the British Army following the evacuation from Dunkirk furnishes the most spectacular clinical evidence of its efficacy so far available. Approximately 90 per cent of the British military personnel had received prophylactic inoculations on a voluntary basis a year previous to the beginning of the war, which left 10 per cent unprotected who in this instance served as controls. Eight cases of tetanus developed among the wounded men who arrived in England five or six days later. These eight cases were all among the 10 per cent who had not received prophylactic inoculations. No cases of tetanus occurred among the wounded of the much larger group of 90 per cent who had been actively immunized. It had not been possible to passively immunize the wounded in either group with tetanus antitoxin.

Figures are not available which permit even an approximation of the number of persons who have been actively immunized against tetanus, but the number must be well up in the millions. It is known, however, that the method has been extensively employed by the French, British, Russian, and Italian military forces and it is routine among all branches of the American services. Thus far no reports have appeared in the literature of any case of tetanus having developed in a person properly immunized. In France even horses have been protected by the active immunization process using toxoid with the result that tetanus has been abolished among the animals thus treated.

In considering the use of tetanus toxoid in civilian practice, it is necessary to weigh its advantages against the disadvantages of the older method of passive immunization with antitoxin. While the morbidity and mortality rates for tetanus in the United States Registration Area are comparatively small (a thousand or more cases annually), nevertheless, the average physician in general practice is frequently confronted with the problem of deciding whether a given wound requires the administration of antitoxin. Failure to give it, even in trivial wounds, runs the risk of a medicolegal action if tetanus unfortunately should develop. On the other hand, whenever the physician injects horse serum, he has fully in mind the dangers of an anaphylactic reaction, of serum sickness, or of possible sensitization which would enhance the risks of future, perhaps more mandatory, administrations of horse-serum-containing antitoxin. Tetanus toxoid makes it possible to avoid the undesirable reactions associated with horse serum injections. While the latter have been tremendously reduced by the newer methods of concentrating and refining antitoxin, they have not been improved to the extent that risk of reactions is nonexistent. But there are other disadvantages of antitoxin over active immunization with toxoid. When the usual recommended prophylactic dose of tetanus antitoxin (1,500 units) is administered,

the blood serum will contain approximately 0.1 to 0.25 unit of antitoxin per cubic centimeter. This value is generally regarded as being sufficient to prevent the development of tetanus. Such values, however, are maintained only for about two weeks, and a rapid fall occurs thereafter to complete disappearance within another week or so. While the average incubation period of tetanus falls within a ten-day period, it is not invariably so, and in certain cases it may be much longer than the two-week period of presumed efficacy of the antitoxin. Knowledge of this fact has led to the recommendation that antitoxin administration be repeated at intervals of one or two weeks in severe injuries where tetanus might be a possibility. The situation is quite different, however, when a basic immunity with tetanus toxoid has been completed. Here the administration of a stimulating dose of toxoid at the time the wound is received results in a prompt rise, within four or five days, of the antitoxin level in the blood serum usually exceeding the 0.1 unit created by the direct injection of 1,500 units of antitoxin. Moreover, the rise continues, often reaching 15 or more units of antitoxin per cubic centimeter of serum, and it falls back slowly to original levels after several months or longer. An added point in favor of toxoid is the probability that in basically immunized persons the exotoxin liberated from an incubating tetanus infection would in itself act to stimulate further antitoxin formation, possibly to the point of protection providing the seeding was not too heavy. It may be concluded, therefore, that active immunization with tetanus toxoid not only avoids the risks associated with administration of antitoxin, but it is definitely superior in the degree and duration of protection conferred.

A great deal of investigative work, both in this country and abroad, has been carried on in the last decade in finding answers to the many problems which arose in connection with tetanus prophylaxis. For instance, both fluid toxoid and alum-precipitated toxoid have been compared to determine the relative antigenic properties of each. Practically all published studies are in agreement that alum-precipitated toxoid is definitely superior to fluid toxoid. Next, it was necessary to determine the number and interval between injections of both fluid and precipitated toxoids to obtain the best antitoxin response. Since there is no test for tetanus immunity comparable to the Schick test for diphtheria, serum antitoxin levels have to be determined by observing the effects on animals of injections of specific amounts of mixtures of the serum in question with tetanus toxin. Such experiments have shown that the best antitoxin response with fluid toxoid results when three injections are given at intervals of three and four weeks between injections. Only two injections of alum-precipitated toxoid are necessary and the optimum interval is two to three months, preferably the latter. The exact amount of antitoxin in the blood serum which is required to produce an effective immunity against tetanus is not known, but it is generally agreed that the minimum amount should be regarded as 0.1 unit per cubic centimeter of serum, which, as stated before, is the amount produced by the injection of 1,500 units of antitoxin, which clinical experience has shown to be effective in the prevention of tetanus. The first or initial injection of either fluid or precipitated toxoid does not raise the antitoxin to anywhere near this required level, but the second and third injection of fluid toxoid, and the second injection of precipitated toxoid have been shown in many studies to raise the antitoxic titer to over 0.1 unit per cubic centimeter of serum within a period of seven to fourteen days following the injection. This brings up a word of caution which should be brought out at this point. Any injury received during the interval between the first and last injections of the basic immunization or within thirty days following the final injection of the basic immunization should be treated in the usual way by giving a prophylactic dose of antitoxin.

Considerable work has been done in determining how long an effective immunity persists after the final injection of the basic series. Apparently it varies widely. Some authors report its subsidence to below the level of 0.1 unit within a few weeks or months. In other cases it has persisted as long as two years. There is unanimous agreement, however, that no matter how low the antitoxin titer may have fallen following the completed basic immunization, a stimulating or booster dose given months or years later will result in a rise in the antitoxin level within seven days or less to an effective immunity. The duration of the comparatively high antitoxin level following a stimulating dose is much longer than that which follows the second or last of the basic course, but in time it, too, falls to lower levels. Applying this knowledge practically, then, the procedure indicated in persons who incur an injury which would ordinarily call for tetanus prophylaxis, and who have completed their basic immunization at least a month previously, is to administer a stimulating dose of toxoid. The army regulations require the routine administration of this stimulating dose a year after the basic immunization, as well as at the time an injury in received. Further information is necessary before it can be definitely established that this routine stimulating dose is essential, but until such information is forthcoming one

certainly cannot go wrong in following that procedure.

Recently combinations of tetanus toxoid with other immunizing substances have been recommended. One of the best known of these is combined diphtheria and tetanus alum-precipitated toxoid. The evidence presented indicates that the antigenic properties of the combination is superior in this respect to each when given singly. In the author's experience using this product with several hundred children, no untoward reactions have occurred nor have local abscesses been encountered in any child.

This brings forth the question whether reactions may be expected to occur following injections of either the fluid or precipitated toxoid. Apparently the incidence is extremely low, but the literature does contain reports of persons who have developed anaphylactic reactions and urticaria. Most of these have followed the second injection. In several cases the urticaria persisted for several months. The precautionary measure of having adrenalin available is well worth keeping in mind.

Finally, consideration should be given the question of which individuals should be actively immunized against tetanus. Certainly, it is highly desirable for all military personnel, for children, and for all allergic persons where the giving of antitoxin might be hazardous. Furthermore, it would seem indicated for farmers and industrial workers whose occupation exposes them to increased risks of contamination with tetanus spores.

PROPHYLACTIC PROCEDURES FOR CERTAIN COMMUNICABLE DISEASES

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TYPHOID, PARATYPHOID (A AND B)

Modern effectiveness of active immunization against typhoid and paratyphoid fever is due in large part to studies by medical officers of the Army Medical School. Typhoid vaccine for the Army was first produced under direction of Brigadier General Frederick F. Russell in 1908. The organism (Rawling's strain) used for many years in the preparation of vaccine was chosen because of its "low toxicity and high immunogenic potency." Since 1936, a new strain (No. 58), isolated from a typhoid carrier in Panama, has been used for the manufacture of typhoid vaccine for the Army.[1]

Colonel Longfellow and Major Luippold report that when strains of paratyphoid A and paratyphoid B (Salmonella schotmülleri) are left out of the triple typhoid mixture, the incidence of diarrhea is increased following exposure to infection.

The standard procedure for immunization includes three subcutaneous inoculations at weekly intervals, the initial amount being 0.5 cubic centimeter, and the second and third treatments, 1.0 cubic centimeter.

Since the immunity conferred in the majority of individuals does not exceed two and one-half to three years, it is necessary to repeat the three treatments every three years or to administer one preventive treatment (1 cubic centimeter) each year.

Longfellow and Luippold[2] state that "an individual may be regarded as immune to ordinary typhoid infection when his blood serum will protect mice against 100 minimum lethal doses of a virulent organism — this degree of immunity should be considered as the minimum necessary to protect against typhoid fever."

Some authorities prefer the intracutaneous method since reaction is milder than with subcutaneous inoculation and but one treatment takes the place of three. The following statement is significant: "Revaccination with a single dose of 0.1 cubic centimeter of vaccine (intracutaneously) constitutes a reliable method of renewing immunity to typhoid fever, and should be the method of choice."[2]

Immunization and reimmunization against typhoid and paratyphoid fevers are required for personnel in the armed forces and desirable for those who travel and are subject to varied milk, water and food supplies.

ROCKY MOUNTAIN SPOTTED FEVER

Vaccine for active immunization against Rocky Mountain spotted fever is prepared from embryonic chick tissue by the yolk sac method of Cox. As with all biologic products, this vaccine should be kept under constant refrigeration until time of use, but should not be allowed to freeze.

Immunization is advised for persons who are repeatedly exposed to the wood tick or common dog tick (Dermacentor variabilis) in known endemic areas.

The procedure for adults and children over ten years of age is to administer two injections of 2 cubic centimeters each or three of 1 cubic centimeter each at intervals of five to ten days. An additional injection is desirable in areas of a high case fatality rate. Children under ten years of age require half the adult dosage.

Chick embryo vaccine is at least as effective and may prove more effective than tick-tissue vaccine.

It is desirable that vaccination be repeated each year. No severe local or constitutional reactions have thus far been observed.[3]

Chick embryo vaccine is supplied without cost, through the courtesy of the Rocky Mountain Laboratory of the United States Public Health Service, and is available on request from the Iowa State Department of Health.

TYPHUS FEVER

Vaccine for active immunization against typhus fever is made from the virus-infected yolk-sac membrane of growing chick embryos, according to the method developed by Herald R. Cox of the United States Public Health Service.

Sufficient evidence is not available regarding the value of this vaccine in conferring immunity in man; it is probable, however, that the vaccine produces a certain degree of protection. Three injections of vaccine are administered, the amount of each being 1 cubic centimeter with an interval of seven days between treatments. Subsequent immunization consists of a stimulating dose with 1 cubic centimeter of typhus vaccine as long as danger exists of exposure to infection. Untoward reactions have not been reported.

YELLOW FEVER

Yellow fever vaccine as reported by Soper[4] is made from a strain of virus known as 17 D, one "which has not only lost in great part its viscerotropic affinity for liver and kidney tissue but also, in contrast with the strain previously used, shows a greatly reduced neurotropism."

Virus 17 D grows rapidly when inoculated into the developing chick embryo; the infected embryo is used in the preparation of the vaccine. This vaccine is kept in concentrated form, being diluted ten times with saline solution immediately before use. Unused diluted material must be discarded.

Only one preventive inoculation is administered. Active immunity is known to last for a period of four years and possibly longer. Due to the fact that yellow fever vaccine must be refrigerated at a temperature not exceeding four degrees centigrade, this preventive agent is available only at points of embarkation.

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Chairman Hill: One of the traditional tasks of the chairman is to summarize the material presented by members of his panel. From what you have seen in the film and what has been said on the platform, it is apparent that the list of diseases now susceptible to prevention has grown to considerable proportions.

All children should be routinely immunized against diphtheria, smallpox, whooping cough, and tetanus. It is desirable that these immunizations be completed within the first year of life: Pertussis immunization is best carried out in children about eight months of age, and diphtheria immunization around nine months when any inherited immunity has been lost. Single injections cannot be depended upon to produce a lasting immunity against diphtheria. Schick testing or, better still, reimmunization should be carried out for children when they begin school and again at the beginning of junior high school. Revaccination against smallpox should be done at five to seven year intervals. Whooping cough and typhoid antibodies may be stimulated by annual doses of vaccine. Active immunization against typhoid and scarlet fever is practicable and may be carried out whenever desired.

MYCOTIC PULMONARY INFECTIONS*

REPORT OF A CASE

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At this time of the year when we see many patients with respiratory infections, and especially the pneumonias, it seems appropriate to call attention to the less common diseases of the lungs. The consideration of them may make it easier for us to arrive at a correct diagnosis in puzzling cases like the one of the following patient.

CASE REPORT

History: E.S., a white male, 57 years of age, was a cabinet maker. He entered the hospital with a complaint of cough, shortness of breath and pain in his chest. He had been bothered with a chronic cough for two years prior to his admission, expectorating thick, yellowish phlegm. He admitted that he was a heavy smoker, but had stopped smoking a week before entering the hospital. A week before that he had developed a sharp pain in the upper right chest. He had had occasional difficulties in breathing, a persistent pain in the chest, a feverish feeling and growing weakness, and on the day of admission had become much worse, complaining of severe pain in his chest and increasing difficulties of breathing. He stated his sputum had been rusty colored on different occasions.

*Presented before the Mercy Hospital staff meeting in Cedar Rapids in January, 1942, and published with the kind permission of Dr. C. T. Houser.

Past History: Essentially negative. His family history revealed that two of his cousins were afflicted with tuberculosis and one of them had died of that disease.

Physical Examination: The patient was a poorly nourished man with a grey, pale skin color. He was perspiring freely and was wheezing since there was a marked dyspnea. He appeared quiet and intelligent. Thick, yellowish phlegm was seen in the nasopharnyx. The tongue was dry and heavily coated. The heart revealed no pathology, the blood pressure was 100/55. On auscultation of the lungs, an area of amphoric breathing was found, reaching from below the middle of the right clavicle to the level of the third rib. Loud, coarse, gurgling râles were heard over the right lung. There was dullness and flatness to percussion, anteriorly over the right upper lobe and especially in the second intercostal space. Below that space the percussion note was rather resonant. Vocal resonance was greatly increased over the upper right lobe and pectoriloquy was pronounced. There were also numerous moist râles throughout the left lung, but the percussion note was rather tympanitic on that side. The abdomen was somewhat distended, the extremities clean, and the reflexes physiologic.

Laboratory Findings: The blood examination revealed 4,700,000 red blood cells; the hemoglobin was 14.7 gram; and there were 11,600 white blood cells with 20 per cent stabs, 60 per cent segmented, 15 per cent lymphocytes, and 5 per cent monocytes. The urine specimen was essentially negative, although it was positive for bile. The examination of the sputum revealed 4 plus leukocytes, and a small amount of blood, with many gram-negative cocci in clusters, a negative Neufield reaction and no acid-fast bacilli. A guinea-pig inoculation test for tuberculosis also was negative. X-ray examination of the chest showed consolidation in the upper half of the right lung, with marked infiltration of the lower part of the right hilus.

Clinical Diagnosis: A provisional diagnosis was made of chronic bronchitis with superimposed staphylococcic pneumonia and abscess formation in the upper right lobe. Consideration was given to the possibility of either a caseous pneumonia or a tumor of the upper right lobe.

Course in Hospital: The patient was treated with sulfathiazole, stimulants and oxygen. Twelve hours after entrance, however, he suffered a severe coughing spell, expectorating large masses of pussy phlegm. He expired soon after this attack.

AUTOPSY ABSTRACT

At necropsy the heart was found enlarged. The right lung weighed 1,922 grams, and was mottled in appearance, dark red, and contained many small abscesses. There was one rather large abscess in the apex, which contained at least two ounces of pus. The left lung showed areas of consolidation but no bronchiectasis. The liver showed cloudy swelling, as did the kidneys which were slightly enlarged; their capsule stripped easily. The adrenal glands were normal. The spleen was congested, firm, moderately enlarged, and weighed 278 grams. The microscopic examination of the right lung showed areas of necrosis and a moderate amount of deposit of coal pigments. There was extensive connective tissue proliferation, with many red cells scattered throughout the sections. In a few places there were many small blood vessels filled with blood, and a few erythrocytes scattered through the sections.

Examination of the pus which was expressed from the right lung during the necropsy revealed, in a plain smear, several small, round organisms with a homogeneous, hyaline capsule around them. A gram stain was made which showed, besides numerous staphylococci, the same organisms to be gram-positive; however, the capsule did not stain. With Wright's stain, the organisms stained deep blue. Several of them were found in a state of budding, which ascertained our suspicion that we were dealing with a yeast infection. A culture was set up on Sabouraud's culture medium, and the unmistakable smell of yeast found. Colonies appeared as white, glistening, small circles which did not show any mycelian filaments. A fermentation test was negative.

COMMENT

The question of the kind of yeast with which we were dealing led us to the discussion of the classification of fungi. Unfortunately, this subject is in great confusion and anything but clear. Although there are a few incidents where different authors have classified one and the same organism into different groups of fungi, I endeavored to arrive at what I hope will seem a sensible classification, having tried to bring into agreement the various opinions prevailing about this subject.

The organisms which produce the clinical picture of mycotic infections belong to the general group of Hyphomycetes, also called fungi imperfecti. Widely accepted is the differentiation of these Hyphomycetes into two major groups, as classified by Castellani. He called the one group "yeastlike fungi," and the other "filamentous

fungi." However, his further classifications are complicated, and I granted myself the liberty of deviating from them and establishing the system as seen in Table I.

TABLE I

HYPHOMYCETES

Yeastlike Fungi		Filamentous Fungi	
Name	Synonym	Name	Synonym
Blastomyces	Saccharomyces hominis (Busse)	Actinomyces	Actinomyces bovis
Torula	Cryptococcus hominis (Benham)	Streptothrix	Actinomyces hominis
Monilia	.....		
Coccidioides immitis	Oidium coccidioides		
Sporothrix	.....		
Aspergillus	.....		
Mucor	.....		

These nine species represent the organism commonly found as causative agents in mycotic infections of the lungs.

Blastomycosis: Sometimes the mistake is made of calling all fungus infections of the lungs blastomycosis. This, of course, is not correct; but it may be attributed to the fact that blastomycosis is one of the most widely distributed infections of that type. I therefore wish to describe the organism somewhat more in detail. These blastomycetes are a group of allied organisms rather than an individual species. Unstained, in a smear of material preferably mixed with a 20 per cent solution of potassium hydroxide, they show up as round or oval bodies. They are highly refractory, are surrounded by a hyaline capsule, contain granules and frequently some vacuoles, and form branching mycelian filaments. Not all forms show the double contour which has been acclaimed as specific for blastomycetes. They reproduce by budding, forming figure eight shapes, and grow on a culture like Staphylococcus albus, forming white, glistening, round spots. In tissue cuts, they are circular parasites within multinucleated giant cells. Most of them do not ferment carbohydrates, although a fermenting type has been described by Busse. Blastomycosis occurs chiefly in Chicago and vicinity and presents most of the symptoms commonly found in pulmonary fungus infections.

Torula: It is often difficult to differentiate this group from blastomycosis; in fact, the Cryptococcus hominis has been classified by Busse under blastomycetes, and by Benham under Torula infection. Torula is called by many authors "an ill-defined group of yeast-like fungi." However, the Cryptococcus presents several characteristics, as tabulated in Table II, by which it may be recognized.

TABLE II.

TORULA

(Cryptococcus hominis)

1. Gram positive with gram-negative capsule
2. Deep blue with Wright's stain
3. Reproduces by budding
4. Forms no mycelia
5. Has no endospores
6. Does not ferment carbohydrates
7. Has marked affinity to central nervous system and lungs

Torulosis (Torula infection) was first described by Studdard and Cutler in 1916. It is a rare disease, which most frequently involves the brain, meninges, and lungs. The majority of the few cases reported have occurred after the fiftieth year of life, and those which involved the lungs were described as miliary nodules, chronic abscesses, or bronchopneumonia.

Moniliasis: Monilia is a yeast and mold-like, gram-positive fungus, which reproduces by budding of cells and mycelia. It was first seen by Langenbeck in 1839. Monilia albicans is known to all of us as the causative organism of the familiar thrush, which sometimes occurs in the mouths of infants. Although primary moniliasis of the lungs is rare in our climate, secondary invasion in cases of tuberculosis, cancer, and bronchiectasis is not uncommon. Pulmonary moniliasis is most common in the subtropics. Castellani found a number of cases in Ceylon and called the disease "tea-tasters" or "tea factory-workers cough," thus labeling it as an occupational disease.

Coccidioidomycosis: This disease is caused by a fungus called Coccidioides immitis, which is double contoured and not dissimilar to the blastomycetes. It may easily be distinguished from the latter, however, by the fact that it does not reproduce by budding but by endospores.

The disease is frequently found in California. It affects males much more frequently than females, and especially those in the age group of twenty-five to forty-five years. Primarily, it occurs either as a cutaneous or a pulmonary infection. It forms irregular, nodular consolidations in the lung and is frequently mistaken for tuberculosis. Giant and epithelioid cells can be found in microscopic sections. Due to this tubercle-like appearance, the disease is also called coccidioidal granuloma.

Sporotrichosis: The organism is a gram-positive, spindle-shaped cell which bears spores. The infection is mostly limited to the skin and lymphatic vessels, and is extremely rare in the lungs. They become infected only if a generalized dissemination through the blood stream, with sporotrichotic abscesses, should take place.

Aspergillosis: The Aspergillus fumigatus is a polynuclear organism which produces spores and branching threads. It is found more commonly in France and in tropical countries than in the United States, and affects mainly people whose occupation is connected with the handling of grain or inhalation of grain dust, since the germ is found in various cereals, straw, and hay. Clinically, Aspergillus is known to us as the cause of external ear infections. It frequently occupies the respiratory tract as a harmless parasite, but if it becomes pathogenic and affects the lungs, the condition is serious and resembles tuberculosis. Other organs, such as the liver and kidneys, are affected simultaneously.

Mucormycosis: This disease is very similar to Aspergillosis. Mucors form, like the Aspergillus, characteristic hyphae, but they are not pathogenic.

Actinomycosis and streptothricosis belong to the filamentous rather than to the yeastlike fungi, and therefore are beyond the limit of our discussion. They are not rare diseases and are widely described.

As far as the clinical picture is concerned, there are some points of importance which apply to all pulmonary fungus infections. The most outstanding is their great resemblance to tuberculosis. Many yeast infections undoubtedly have been called rare because they were mistaken for other, and especially tuberculous infections. Therefore, the possibility of a fungus infection should always be borne in mind when a patient offers findings typical of tuberculosis but without tubercle bacilli being found in repeated sputum examinations. Furthermore, we should think of a fungus infection when a pulmonary disease will not fit into the picture of any of the accepted diagnostic categories. Hamman describes this situation vividly by saying that mycotic disease of the lung "masquerades" in the likeness of a number of well-known pulmonary infections.

The symptoms produced by mycotic infections are similar for all species, with a few individual variations, but they have no characteristic marks by which they could be recognized as such mycoses. However, sputum examinations will often prove helpful, since the organism, when found, can easily be recognized as a yeast.

Pulmonary mycoses may run a mild course with only a few chest symptoms, resembling a chronic bronchitis. However, many of these infections take a malignant course with a high mortality rate. People who live in unhygienic or wet surroundings where all kinds of molds are liable to grow are particularly affected. The infection takes place most frequently by inhalation. These infections begin like a bronchopneumonia, and, in later stages, resemble tuberculosis. At the onset, all symptoms of a pneumonia may be found, such as fever, expectoration of bloody or purulent material, dyspnea, and pain in the chest. These symptoms were all present in the case under discussion. Physical examination often will reveal dullness on percussion and râles on auscultation. Loss of weight, secondary anemia, hemoptysis at some time or other, and a chronic, productive cough with no odor at all or only a slightly foul one attached to the sputum, are diagnostic aids. The blood picture does not offer any particular findings, although a moderate leukocytosis can be expected. The prognosis is grave; the mortality rates usually average between 80 and 90 per cent.

The only therapeutic aid which can be given consists of large doses of potassium iodide. Certain forms may be benefited by x-ray treatments. All other measures, however, must be symptomatic, with special attention to abscess formations, which may—and frequently do—occur in practically any form of fungus infection.

Having discussed all yeastlike organisms which may cause pulmonary infections, we must establish a final diagnosis for our case. Since the laboratory findings fulfill all requirements summarized in Table II as characteristic of Torula, we feel justified in making a diagnosis of pulmonary mycosis caused by an organism belonging to Castellani's group of yeastlike fungi, probably the Cryptococcus hominis (Benham). We believe the yeast infection can be regarded as the primary lesion with the secondary staphylococcic invasion being responsible for the extensive necrosis in the right lung and the fatal septicemia. The report of the pathologist that there was extensive connective tissue proliferation, a finding which would be atypical for a staphylococcic infection, is further evidence for this belief. Our microscopic findings also correspond with those of Sheppe's in his classical report on Torula in man, in which he stated that "proliferation of fibrous connective tissue makes the process one of repair rather than of defense."

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PERNICIOUS ANEMIA

REPORT OF A CASE WITH FIFTEEN YEAR REMISSION*

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Before the advent of liver therapy of pernicious anemia advocated by Minot and Murphy in 1926, the average case pursued a persistent downhill course resulting in death, often within a few weeks and practically always within one year. Remissions, interrupting the course of the disease and postponing the inevitable, were common. During these remissions it was not uncommon for a patient to appear healthy and apparently cured. Relapse occurred sooner or later, however, and death resulted from the anemia. Cabot made a careful study of 329 cases of pernicious anemia with remission (Table I). Of the 329 patients all but twelve suffered relapse within twelve months. Remissions which lasted longer than two years were medical curiosities and intensively studied in the search for a specific substance responsible.

TABLE I

Cabot's Summary of 329 Cases of Pernicious Anemia with Remission

Length of Remission	Number of Cases
1 to 3 months	79
3 to 6 months	85
6 to 9 months	53
9 to 12 months	100
2 to 3 years	8
3 years	1
4 years	2
6 years	1

Strauss and Pohle in 1940 studied the length of remission in pernicious anemia following liver therapy and found that patients relapsed in two to twelve months after single massive doses of liver extract. The duration of the induced remission was found to be a function of the individual patient rather than of the treatment. A satisfactory explanation of the so-called spontaneous remission has never been made. A review of the literature shows a lengthy remission to be extremely rare (Table II).

TABLE II

Physician Reporting	Year	Duration of Remission
Freund, H. A.	1908	11 years
Thayer, W. S.	1908	5 years
McPhedran, A.	1910	17 years
Stockton, C. G.	1919	12 years
von Willebrand, E.	1922	10 years
Speidel, W. C., and Goss, C. C.	1924	14 years
Swan, W. H.	1925	14 to 16 years
Weber, F. P.	1932	15 years
Cabot, R. C.	1927	6 years
Author	1943	15 years

CASE REPORT

Chief Complaint: The patient, a white, male laborer, seventy years of age, was referred to the Hematology Clinic January 12, 1941, because of paleness.

History: The patient's father died of heart disease; otherwise the family history was negative. He had been married, but his wife died in 1926 and there were no children. In 1908 he underwent an operation for pain and cramps in the upper abdomen; the appendix was removed through an upper right rectus incision, but lead poisoning was considered as a possible diagnosis. In 1910 he had a hard chancre. He was treated rather sporadically at first, but in 1926 took regular treatments with arsenic and was pronounced cured. In 1936 he underwent an iridectomy in the right eye for primary glaucoma. The iridectomy relieved his glaucoma, and except for back pain which was attributed to spondylitis, he had been well until a few months before admission.

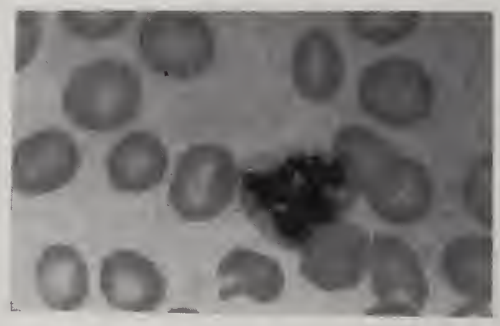


Fig. 1. Peripheral blood before treatment. Note the macrocytes and the multilobar neutrophil.

Present Illness: The patient complained of weakness, moderate dyspnea on exertion, numbness and tingling of the hands and feet, dizziness, pain in the back, and difficulty in walking at times with a tendency to stagger. For many years he had noticed some numbness and tingling of the hands and feet occasionally, but during the few months prior to admission this had become more

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marked. He had noticed nausea and some epigastric distress at times.

Physical Examination: The patient appeared pale and had an almost imperceptible yellow tinge to the skin. The right pupil was irregular and reacted sluggishly to light. The left pupil reacted to light normally. The extra-ocular movements were normal. The sclera were fainty tinted. The ears and nose were negative. The mouth was edentulous, gums were normal, and the tongue was

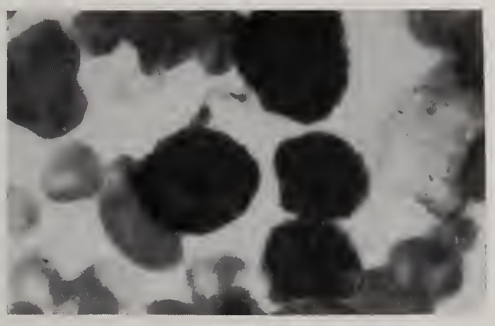


Fig. 2. Bone marrow. Note the dark-staining megaloblasts.

smooth and glistening. The chest was normal. The heart was normal and the blood pressure was 150/100. The abdomen showed an old upper right rectus scar which was firm. The liver and spleen were not palpable. The genitals were normal. The reflexes—biceps, triceps, patellar, and achilles—were slightly exaggerated. Babinski's reflex was negative. No clonus was noted. The patient swayed moderately in Romberg position. Vibratory sensation was absent from a short distance below the knee. The red blood count was 2,840,-

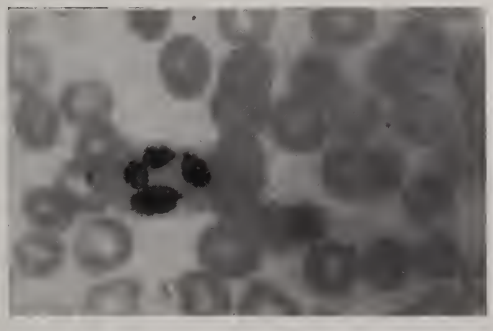


Fig. 3. Peripheral blood after treatment. Note return of normal cells.

000; the white blood count 3,200; and the hemoglobin was 55 per cent. Urinalysis was negative. The blood smear showed a macrocytic anemia, moderate regeneration. There were numerous, hypersegmented, polymorphonuclear neutrophils present. Gastric analysis revealed no free hydrochloric acid after histamine. A study of bone marrow, by sternal aspiration, showed a typical megaloblastic picture of pernicious anemia in relapse. The blood Wassermann was negative. Spinal puncture at a later date revealed normal fluid, count 1, Wassermann negative, colloidal gold 222111100.

Clinical Diagnosis: Pernicious anemia in relapse.

Treatment: Beginning February 5, 1941, the patient was given weekly injections of 3 cubic centimeters of concentrated liver extract, containing 15 units per cubic centimeter. After the second week this was increased to twice weekly for a period of three weeks; thereafter he received one injection of 3 cubic centimeters weekly. The blood counts were as follows:

	Red Blood Count	Hemoglobin
February 5, 1941	3,080,000	60%
February 12, 1941	3,260,000	70%
February 19, 1941	3,500,000	70%
February 26, 1941	3,840,000	70%
March 5, 1941	4,100,000	75%
March 12, 1941	4,250,000	75%
May 14, 1941	4,520,000	80%
February 7, 1942	4,460,000	80%
November 4, 1942	4,480,000	15.6 grams

COMMENT

When the patient was informed of the diagnosis and the treatment necessary, he stated to the incredulous examiner that he had been diagnosed as having pernicious anemia in 1923 in the outpatient department of the Indianapolis City Hospital. He stated that he had been admitted to the Indianapolis hospital in 1925 for treatment for pernicious anemia, and that he was in Jefferson Hospital in Philadelphia in 1926 with the same diagnosis. He began to improve in 1926 and from that time until the present relapse had received no treatment for his anemia, had felt well, and had been able to work as a laborer. Upon request these hospitals furnished detailed reports of the patient's history which confirmed his statements. He had been admitted to the Indianapolis City Hospital on October 24, 1925, and had been discharged December 17, 1925. He had the typical findings of primary pernicious anemia. His red blood count on discharge was 1,890,000; the white blood count 2,700, and the hemoglobin 39 per cent. The blood Wassermann was negative and, after having been treated by transfusion and arsenic, he was discharged unimproved. The report from Jefferson Hospital in Philadelphia was essentially the same, stating the patient had been admitted and discharged in October, 1926.

This, then, is a true case of pernicious anemia. It was first diagnosed in 1923 and underwent a spontaneous remission (without liver therapy) in 1926, which was maintained until January, 1941, when relapse occurred. A remission was then in-

duced with liver therapy and it has been maintained until the present date. The duration of the disease to the time of relapse is eighteen years, with a remission of fifteen years.

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THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

KIDNEY TUMORS

IRVING KAUFMAN, M.D., Dubuque

Neoplasms of the kidney have furnished a fertile field for discussion and argument by pathologists attempting precise positioning of entities into the realms of a classification. The complex structure of the kidney arises from a variety of embryologic tissues which undergo intensive evolution to the adult form. This background helps explain the bizarre forms of new growths. Our purpose is not to attempt clarification of this obscure and complicated subject but to add one more clearly defined case study for others to consider.

Benign tumors of clinical importance are a small minority and include fibromas, angiomas, lipomas, adenomas, and teratomas. These become of surgical interest when they are large enough to cause pressure symptoms or when the patient or doctor feels or sees them. Most of them are first recognized as incidental findings at the autopsy table.

Malignant growths may be primary or metastatic. The primary tumors usually arise in the cortex and only rarely occur in the pelvis or ureter.

Age analysis reveals two widely separated groups, childhood and after the forty-year mark. Those tumors seen early in life are of embryonal or teratoid tissue, and those in adults belong to the epithelial tissue class. Sarcomas are rare and usually arise from a degeneration of teratomatous tissue.

Anatomically, Ewing[1] differentiates the epithelial tumors of the renal cortex as follows: (a) Papillary adenocarcinomas with two subvarieties; one with clear cells, often confused with hypernephromas, and a second with granular cells easily segregated from the hypernephromas; (b) Alveolar carcinomas, the important variety being the tubular adenocarcinoma. These two main types are characterized by their tendency to infiltrate and produce enlarged kidneys while preserving their form. (c) Hypernephromas arising from misplaced suprarenal gland tissue.

Clinically, Israel and Israel[2] define four recognizable types irrespective of the histologic background:

1. Solid or infiltrating carcinoma: This tumor produces general enlargement without destruction of the kidney form. There is frequent invasion of the capsule and fixation to the surrounding tissues. This group may comprise 3 to 4 per cent of the total.

2. Sarcomas: These new growths are rare, and in children a single tissue may predominate after a teratoma degenerates.

3. Wilm's mixed tumor: This type is common in children and represents a teratoid malignancy arising from embryonal rests. Three-fourths of the cases are seen in children under three years of age. The renal tissue is quickly destroyed and fixation occurs in about 50 per cent of the cases and metastases are found in at least 33 per cent.

4. Malignant nephromas or Grawitz's tumors: These tumors are characterized by their tendency to remain circumscribed and in most cases encapsulated. More than 80 per cent of malignant tumors of the kidney in adults over forty years of age belong to this group. Grawitz, in 1883, described these tumors as hypernephromas because their histologic features suggested misplaced adrenal gland tissues. Certainly, many are not of this origin, but actually are carcinomata of the kidney as previously mentioned. The clinical and gross anatomic behavior of this group of tumors is of sufficient uniformity to warrant their separation as an entity regardless of their histogenesis

until such time when each histologic variation can be properly related to its clinical type. Gross examination usually reveals a circumscribed, often encapsulated, yellowish growth, tinged with brown, depending on the amount of hemorrhage. Pseudocyst formation may be present following necrosis. In the later stages the capsule of the tumor may be perforated and the renal pelvis or parenchyma invaded. Extension of the tumor may occur in the five following methods: direct extension through the capsule; lymph node metastases via the perivascular lymphatics; invasion of renal vein or vena cava with formation of tumor thrombi; hematogenous dissemination of single or small numbers of cells; or extension to the renal pelvis, ureter, and bladder. Of these methods, gross extension into the veins or microscopic hematogenous metastases are the most common. In one-third of the cases, metastases are seen in the lungs and pleura. The opposite kidney, liver, bones, peritoneum, and adrenal glands are also common areas for metastases.

The classical symptomatology of tumor, hematuria and pain is usually not found in every case. Hematuria is the most common and most important manifestation and is present in 50 to 80 per cent of the cases. Hematuria, which may be the earliest symptom, is often painless. Colic may be produced by passage of clots. The initial bloody urine may last a few moments or for many days and require surgical interference. A period of months and occasionally years may intervene between attacks and the burden of proof rests upon the first examiner to rule out malignancy.

Pain is the next important sign and usually consists of a dull ache in the flank or loin except when the complications of urinary obstruction or passage of clots alters the syndrome.

Unfortunately for the patient, tumor or mass formation, when palpable, is a sign of considerable progress or extension of the disease. Occasionally, the presence of a kidney tumor is suspected only after metastases have broken down in a distant organ.

The majority of kidney tumors can be diagnosed without difficulty. The smaller growths, or those which have not invaded the renal pelvis, present a more puzzling problem. In the absence of a palpable tumor, roentgen findings become the only positive indication of a new growth. The flat film may visualize calcified stones or an enlarged kidney. It must be remembered that both may exist simultaneously and that urate stones produce no shadow. Cystoscopy and pyelography, retrograde and excretory, are the next procedures to be performed. The demonstrable changes depend on the size and location of the tumor. Shortening, elongation or absence of a calyx may be the earliest sign. Filling defects will occur when the growth enters the renal pelvis.

The differential diagnosis must consider stones, tuberculosis, and nephritis. Where a tumor is the outstanding finding, extrarenal retroperitoneal tumors, large spleens, and cysts of the kidney must be considered and appropriate diagnostic measures performed.

Prognostic considerations are very discouraging. The operative mortality rate ranges from 10 to 35 per cent. The end results are even worse. The number of five-year cures is small and the percentages vary between 4 and 20 per cent. The Mayo Clinic[3] reports 45 per cent alive after five years, which is the best record reported.

Before treatment is considered, examination of the lungs and bones must be made. The condition of the opposite kidney should be determined. The general condition of the patient is usually good until the last stages of the disease. The question of operability is technical and is frequently settled only at the operating table.

If single and small metastases are seen, an operation is still advisable, since there are recorded instances of retrogression of the metastatic area, spontaneously or after irradiation, after elimination of the original focus. Summarizing, one may state that nephrectomy should be performed when the general condition permits, in the absence of gross metastases or signs of invasion of the vena cava, and when there is no serious impairment of the opposite kidney.

Radiation therapy has long been a moot point. Opinions expressed by leaders of clinics indicate, in certain instances, that the procedure is routinely used with good results, and in other localities no material benefit was derived from such procedures. It is obvious that radiosensitivity is variable and only by therapeutic test can the sensitivity be determined. It is definitely known that tumors are not entirely curable by x-ray therapy alone. Conclusions to be drawn indicate that small malignant nephromas should be operated upon an once. Tumors of considerable size and whose operability is questionable may be irradiated and followed by surgical removal if some retrogression has occurred in three or four weeks subsequent to the treatment.

The following case history illustrates many of the characteristics of kidney tumors as previously discussed, but it also serves to emphasize the importance of guarding prognostic statements.

CASE REPORT

History: A white male, fifty years of age, whose past history was irrelevant to the final story, entered the hospital on January 17, 1942, complaining of recurrent hematuria. The initial episode occurred five weeks earlier while he was away from home. He was given medication and advised to stay in bed. There was no recurrence until a week before admission to the hospital.

Physical Examination: There were no significant findings. Urinalysis of a specimen obtained from the left ureter during cystoscopy indicated that side to be the source of the hematuria. Retrograde pyelography revealed an enlarged left kidney shadow. The left renal pelvis and all calyces were elevated by a large rounded mass in the lower pole. The inferior major calyx was elongated. There was a walnut-sized, round, smooth filling defect in the renal pelvis.

Clinical Diagnosis: Tumor of the lower pole of the left kidney with the pelvic defect suspected of being either a tumor invasion or a blood clot.

Treatment: A left nephrectomy was performed on January 19, 1942, through a left loin incision. The patient recovered and was discharged ten days later.

Pathologic Report: Examination revealed a tumor mass occupying the lower third of the kidney and on section there was disclosed a large, yellowish brown tumor softened in the center where a recent hemorrhage had occurred. Outside the main tumor were seen several, silvery gray, translucent nodules measuring one-fourth to one centimeter in diameter. The growth appeared to be confined within the kidney capsule. Microscopically, the sections showed masses of epithelial cells invading the renal parenchyma. In some areas there was a suggestion of gland formation and numerous hemorrhages were seen. The cells were fairly rich in chromatin, showed mitotic figures, and resembled cells of the renal tubules.

Anatomic Diagnosis: Malignant nephroma.

Subsequent Course: The patient continued to be well and was examined in the summer of 1942. No evidence of a recurrence was detected at that time. He worked until December 29, 1942, when he complained of a headache. On December 31, 1942, he again complained of a severe occipital headache accompanied by dizziness. He walked upstairs and fell. He was helped to bed and subsequently vomited several times. On readmittance to the hospital, the patient was comatose. The left arm was limp. The right pupil was dilated and the left pinpoint; both were "frozen." The abdomen was distended. The left knee jerk was absent and the left facial muscles flaccid. The pulse was 40 and the blood pressure 145/80. Death occurred fourteen hours later.

Final Clinical Diagnosis: Brain hemorrhage with metastases.

Anatomic Diagnosis: Postmortem examination revealed metastases to the right side of the brain with hemorrhage into a cavity 6 centimeters in diameter and metastases to the right lung.

COMMENT

In review, one may note that an apparently successful removal of an intact kidney tumor was followed by the growth of microscopic metastases which had spread through the blood vessels.

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CONGRESS ON MEDICAL EDUCATION AND LICENSURE

The thirty-ninth annual Congress on Medical Education and Licensure was held in the Palmer House in Chicago February 15 and 16, 1943. The Monday meeting was called to order by Dr. Ray Lyman Wilbur, chairman of the Council on Medical Education and Hospitals of the American Medical Association. Dr. Wilbur did not give a detailed report of the activities of the Council, saying it had been a year of stress and strain for medical schools and hospitals, but warning that the full impact had not yet been felt. He mentioned the number of doctors provided for the Army and Navy, and said the men in service were receiving the very best medical care, due to the fact that high standards were insisted upon. He warned that streamlining of medical education involves sacrifices, but lowering of standards must be avoided. He also said the doctor on the home front is as important as the doctor with the troops, and that preventing sickness and shortening illness is vital.

Rear Admiral Ross T. McIntire, M.D., Surgeon General of the United States Navy, was the first guest speaker. Admiral McIntire gave credit to the medical schools for doing a good job under difficulties. He mentioned the new plan for training doctors and said he was a little afraid of its results after the war, but because the need is urgent now, the chance will have to be taken. He placed great emphasis on the study of tropical diseases and preventive medicine, telling how the troops in

(Continued on page 127)

State Department of Health

Walter L. Bierring

Pneumonia Laboratory Technic Course

The eighth pneumonia laboratory technic course, announced in the February issue of the Journal, page 62, was held at the State Hygienic Laboratory in Iowa City, February 16 to 18, 1943. Practically all of the twenty-nine persons who attended were hospital laboratory workers; one of the group was a physician. Four of the state hospitals were represented.

The recent course brings to 219 (177 laboratory workers and 42 physicians), the number of people who have participated in the special pneumonia laboratory courses in recent years. The first of these courses was conducted December 7 to 9, 1938.

At the recent meeting, Dr. Barnes discussed the manner of spread of pneumonia, and emphasized the importance of accurate bacteriologic diagnosis. A moving picture was shown, entitled Pneumococcus Pneumonia. Methods for the determination of the blood level of sulfonamide drugs were outlined and demonstrated by Mrs. Garner. The technic of typing was explained by Dr. Borts. Most of the time was spent in the laboratory with mouse inoculation tests and with Neufeld typing of the pneumococcus, of the Friedländer bacillus, and of unknown types of these organisms.

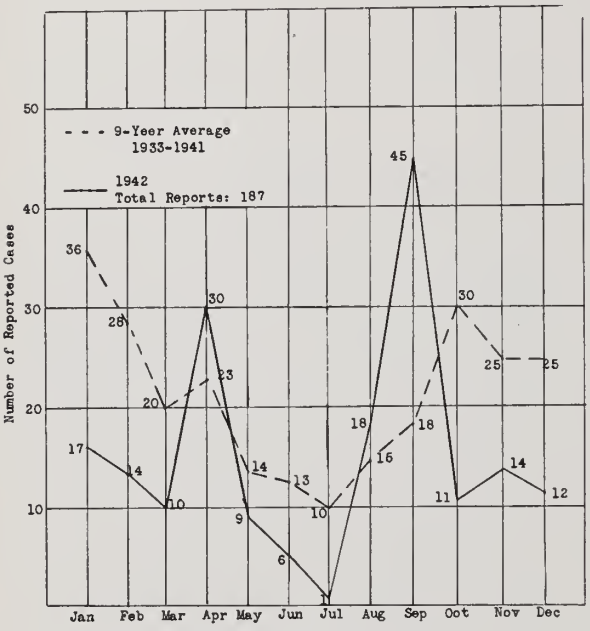
Those in attendance are listed as follows:

Name	Address	County	Hospital
John Paustates	Cedar Falls	Black Hawk	Sartori Memorial
Charlotte Ann Narey	Clinton	Clinton	St. Joseph Mercy
Alene Hoffman	Woodward	Dallas	Woodward State
Mrs. Else de Jonge	Mt. Pleasant	Henry	Mt. Pleasant State
Dorothy Menefee, R.N.	Mt. Pleasant	Henry	Henry County Memorial
Pauline Gingerich	Marengo	Iowa	Watts
Mary Margaret Hall	Iowa City	Johnson	Mercy
Sister Patricia (Gleason)	Iowa City	Johnson	Mercy
Hilda Gene May	Iowa City	Johnson	University Hospitals
Virginia Krichel	Keokuk	Lee	Graham Protestant
Guinn Boehmke	Cedar Rapids	Linn	Mercy
Dorothy Graham	Cedar Rapids	Linn	St. Luke's Methodist
Margaret V. Hockett	Cedar Rapids	Linn	Mercy
Mrs. Jean Kinsey	Cedar Rapids	Linn	Security Laboratory
Helen M. Lutz	Oskaloosa	Mahaska	Mercy
Miss Sarah Lee Weld	Glenwood	Mills	Glenwood State
T. C. La Porte	Clarinda	Page	Clarinda State
T. E. Russell	Clarinda	Page	Clarinda Municipal
Helen Erickson	Laurens	Pocahontas	Dr. Hovenden's Office
Eleanor Amberg	Des Moines	Polk	Broadlawns
Marjorie Bernholtz	Des Moines	Polk	Iowa Lutheran
E. B. Sanford, M.D.	Des Moines	Polk	Broadlawns
Mrs. Ernette Sanford	Des Moines	Polk	Iowa Methodist
Catherine State	Davenport	Scott	St. Luke's
Gene Green	Creston	Union	Greater Community
Virginia Wallace	Washington	Washington	Washington County
Lois McBride	Decorah	Winneshiek	Decorah
Sister M. Cecilia (Cragin)	Sioux City	Woodbury	St. Vincent's
Esther Kallevig	Sioux City	Woodbury	Methodist

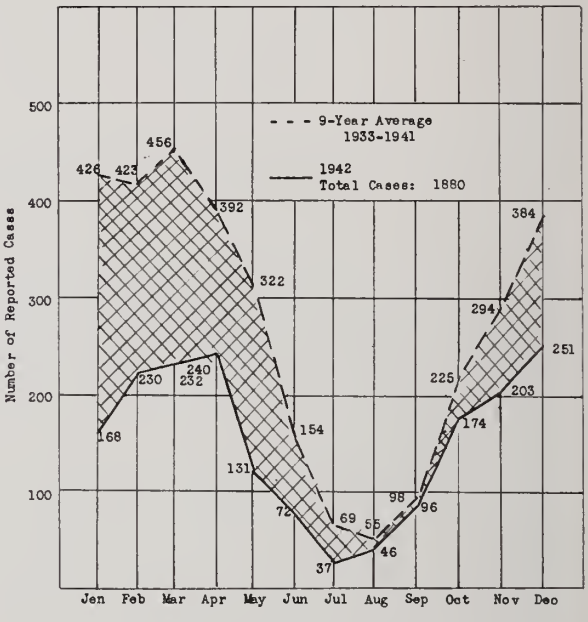
COMMUNICABLE DISEASES DURING 1942

The accompanying diagrams, Figures 1 to 4, show the reported prevalence of diphtheria, scarlet fever, smallpox and typhoid fever during the months of 1942. Included in the graphs are figures for each month, these being an average (tri-central median) for the nine-year period 1933-1941.

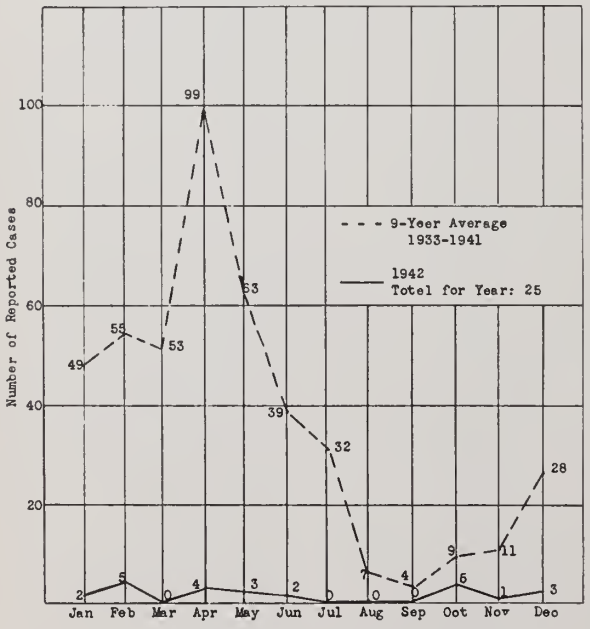
The cross-hatched areas in the diagrams of scarlet fever and typhoid fever represent the decrease in reported occurrence in 1942 as compared with the average for the preceding period of years.



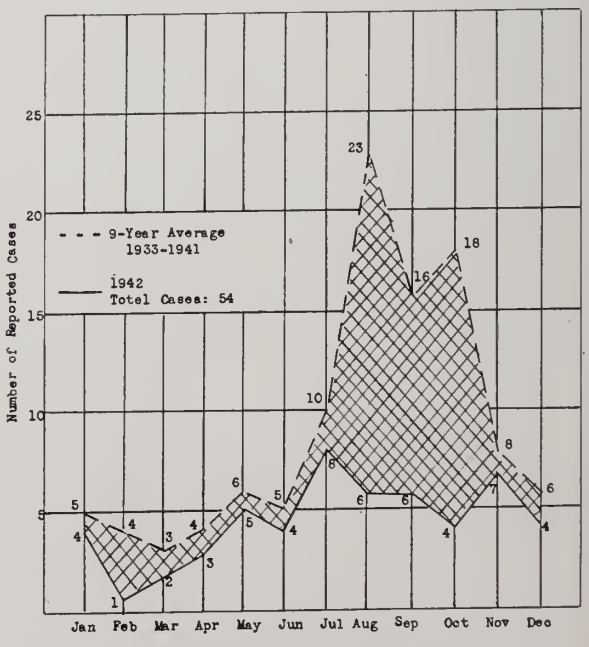
DIPHTHERIA IN IOWA
Reports for the Months of 1942 Compared With the Average (Expected Number) for the 9-Year Period 1933-1941



SCARLET FEVER IN IOWA
Reports for the Months of 1942, Compared With the 9-Year Average for the Period 1933-1941



SMALLPOX IN IOWA
Reports by Months in 1942, Compared With the Average for the 9-Year Period 1933-1941



TYPHOID FEVER IN IOWA
Reports for the Months of 1942, Compared With the 9-Year Average for the Period 1933-1941

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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Dennis H. Kelly, Associate Editor.....Des Moines

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Vol. XXXIII MARCH, 1943 No. 3

THE NINETY-SECOND ANNUAL SESSION

Presented in this issue is the program for the ninety-second meeting of the Iowa State Medical Society, its second war session. This year, as in 1942, the convening place will be the Hotel Fort Des Moines in Des Moines, and the dates are April 29 and 30. In compliance with the legislative edict issued by the House of Delegates in 1942, this year's session will be limited to two days. But the Program Committee has worked long and hard to pack into those two days a series of addresses and presentations which will go far toward making up in quality what the previous longer sessions provided in quantity. Our guest speakers this year, although limited in number, are outstanding and of nationwide reputation in their special fields of practice. Dr. Harry L. Smith of The Mayo Clinic in Rochester will address the general session on Thursday morning and will hold a clinic on the heart before the same group on Friday morning. Dr. Virgil S. Counseller, also of The Mayo Clinic, will appear twice during the meeting, once before the general session on Friday morning and again before the surgical section on Friday afternoon. Dr. Arthur W. Proetz is the guest speaker selected by the head specialties section. This section will join the general session on Thursday morning to hear Dr. Proetz discuss the problem of headache. In the afternoon Dr. Proetz will address the head specialties section.

In addition to these scheduled talks by our out-of-state guest speakers, a variety of subjects of practical interest will be presented by members of the Society. The Fracture Committee will again have two panel luncheons to which all doctors interested in the subjects to be discussed are cordially invited. Altogether, the scientific program as it shapes up this year looks extremely good and well worth the effort we fully realize each busy doctor will have to put forth to make arrangements to be in Des Moines for these two days.

All the other features which go to round out our annual session will be present in full force as in previous years. Spaces for commercial exhibits were completely taken some time ago. With the rapid progress being made in commercial products, particularly drugs, these exhibits should be of special value to visiting physicians this year. The motion picture exhibit will be up to its usual standard of excellence and should attract the interest of everyone.

Arrangements are being made for the Society's golf tournament again this year. Whether or not it will be staged depends upon the number of doctors indicating a desire to attend. We hope it will be, for if any group of war workers (and that is what all physicians are these days) deserve a day of relaxation, it is the doctors who man the civilian front.

We are well aware of the difficulties physicians will encounter in leaving their heavy duties to attend this year's medical meeting, but we believe it is in the best interests of all concerned that they do. Much that is new and important has developed during the past year. War does not slow up medical progress. On the contrary, it stimulates it and many of the advancements that have been made are the results of experiences gained as a result of the war. The importance of maintaining local medical meetings which do not put an added burden on transportation facilities has been emphasized on all sides. So put a circle around the twenty-ninth and thirtieth of April on your calendars, and come to Des Moines to help make the ninety-second annual session the success that Iowa state medical meetings always have been. We'll be looking for you!

THE PHYSICIAN'S RÔLE IN NEW PHYSICAL FITNESS PROGRAM FOR HIGH SCHOOL STUDENTS

Shortly there will be put into effect among the high schools of the nation a special physical education program, the purpose of which is to improve the physical fitness of the high school boys and girls of today who are to become the soldiers, industrialists, and agriculturists of tomorrow. The students who are accepted for this training will form one of the branches of the Victory Corps. Originating in the offices of the Federal Security Agency and the United States Office of Education, the details of the plan have been worked out by a collaborating Committee, under the Chairmanship of Eddie Rickenbacker, representing the Army of the United States, the United States Navy, the

United States Public Health Service and the Physical Fitness Division of the Office of Defense Health and Welfare Services.

"Large numbers of pupils now enrolled in high schools," says the Committee in its pamphlet,* "will enter active service in the armed forces and wartime industry in the immediate future. In addition to the boys who will be called to some form of service, it has been estimated that by the end of 1943, 6,000,000 women will be employed in war production, many of whom will be drawn from the age group now in high school. These youth must be fit in order to render effective service. They must be fit not only from the standpoint of technical skill and morale, but also physically fit, which means that they must have the strength, skill, stamina, and endurance required for active service and hard work."

The program therefore proposes "to make secondary school pupils physically fit to undertake the unusually heavy tasks they will probably be called upon to assume in the near future. For some it will be for induction into the armed forces. For others it will be for employment in agriculture, industry, commerce, domestic services, and other essential occupations."

Fundamentally, the idea back of the creation of this physical fitness program is, of course, another means of facilitating prosecution of the war. "It is common knowledge among physical education instructors in high schools and colleges," states the Committee, "that large numbers of their male students are weak, have poor coordination, cannot climb a rope, carry a burden equal to their own weight, or vault out of a trench the height of their chests. The poor physical condition of the majority of American young people is a serious handicap in training soldiers, sailors, and airmen, and interferes with the maximum industrial and agricultural production." Correction of this situation would, it is estimated, save several months of military training which now have to be spent in building up the recruits physically.

The physical activities recommended for both boys and girls to bring about the desired degrees of strength, stamina, and skill, as well as the hours per week which must be devoted to them, need not be gone into here. But we should like to say a few words about the part physicians may be called upon to play as this program gets under way. At the outset we would make it clear that we are completely in sympathy with the general purposes of the program. In fact, we can visualize other important advantages aside from the obvious ones of physical conditioning. One in particular is the possibility inherent in a program of this sort for attacking the problem of juvenile delinquency which is rapidly assuming such alarming proportions throughout the nation.

In the process of selecting students who are to undergo the rigorous training program, many parents will undoubtedly consult physicians concerning the physical ability of their sons or daughters to stand up under a stiff training schedule. The physician in giving his advice must remember that these are adolescent youth, and that as such they are already under a considerable strain. It is well known, for instance, that the teen age is a dangerous period for the development of tuberculosis, particularly in girls. Neither listening with a stethoscope nor inspecting these persons will reveal those who may be in the process of developing the disease in their lungs. If this risk is to be avoided completely, each student should have a negative tuberculin test or a negative x-ray film of the chest. The military services have found it profitable to have routine x-ray films of all their inductees.

Another phase of adolescent life which should be kept in mind is the difficulty of meeting the nutritional needs of these rapidly growing boys and girls. Even under normal conditions, studies have shown that surprisingly large quantities of protein are needed to maintain adolescents in positive nitrogen balance. The addition of strenuous physical exertion accentuates the difficulty; hence, careful attention to make sure that the diet is sufficient in all respects to meet nutritional needs would seem to be an important consideration in the physical fitness program. Attention, too, should be directed to the characteristic emotional instability of youth at high school age. Glandular changes which are effecting the metamorphosis of the child into the adult are more striking here than at any other stage in life. Under normal conditions the transition is safely made, but excessive strain which might lead to psychologic imbalance should be avoided.

The great majority of the high school youth, of course, will be able to sail through the demands of the physical fitness program with flying colors and will be the better citizens for it, but we have felt it worthwhile to mention certain peculiarities of the adolescent age which it seems to us should be kept in mind, particularly by physicians who may be called upon to assist in formulating the program or who may be consulted concerning individual cases.

According to arrangements which have already been made regarding the selection of students for the physical education program, the physician may

*Physical Fitness Through Physical Education. Victory Corps Series, Pamphlet No. 2, price 25 cents. Superintendent of Documents, United States Government Printing Office, Washington, D. C.

be called upon for services in connection with the program in any one of the following ways:

1. Students may see their family physician on the same basis that he would be seen for any type of medical advice. A certificate as to the student's physical fitness may be given him to take to the proper school authorities. The school may provide medical examinations for those students unable to pay for or obtain these services themselves.

2. Those schools having a school physician may arrange for him to add these examinations to his other duties. Schools without a school physician may be able to employ one for this program by agreement with the county medical society.

3. When it is impossible to arrange for all students to have an examination by a physician, someone of the school staff, for example, the teacher of physical education, may select the students in accordance with the plan described in Chapter III, Selection of Pupils for Training, in the pamphlet entitled Physical Fitness Through Physical Education. Should it be necessary to use this plan, medical guidance may be obtained in instructing or giving demonstrations to the teacher chosen to make the selections.

NEW TREATMENT FOR IMPETIGO CONTAGIOSA

Impetigo is a serious condition when it gets started in the nursery for the newborn infants. Less serious but frequently annoying because of its stubbornness in yielding to treatment is the disease in older children. That no entirely satisfactory treatment has been available for impetigo up to the present time is demonstrated by the multiplicity of recommended methods now in use. Welcome, then, would be the advent of a sure-fire, dependable, therapeutic agent effective quickly and productive of uniformly good results.

Harris, in the February 6 issue of the *Journal of the American Medical Association,* cites his experience with a method of therapy which promises to be superior to any of the previous, commonly used remedies. The drug employed by him was a 20 per cent suspension of microcrystalline sulfathiazole. After removing the crusts by washing with soap and water, a drop or two of the suspension was poured onto a small gauze dressing and this was applied to the skin with the sulfathiazole paste in contact with the lesion. Invariably, states Harris, when the dressings were reremoved twenty-four hours later, the lesions would be healed and no further treatment was necessary. In one patient with twenty-three lesions the dressings were removed in sixteen hours and healing was as complete as in those where the dressings had been left on twenty-four hours. The actual time for necessary treatment may be even less than this, says Harris.

Credit for this rapid cure is given to the physical state of the sulfathiazole. In microcrystalline form, the drug can be kept in constant contact with the organisms, whereas in the case of ointments a crust forms separating the lesion from the therapeutic agent.

Further reports on the treatment of impetigo contagiosa with microcrystalline sulfathiazole will be watched for with interest. If it proves as effective as this report by Harris indicates, a new triumph will be chalked up for sulfa medication.

TREATMENT OF MILITARY PERSONNEL WITH VENEREAL OR OTHER CONTAGIOUS DISEASE

The management of venereal infections among military personnel presents problems no less serious than in civilian life and some which do not exist among civilians. Military medical authorities have, of course, set up certain regulations regarding the procedure to be followed in the cases of servicemen who become exposed or who develop a venereal disease. The objective of such regulations naturally is, first, to prevent infection in the exposed person; next, in the event infection has developed, to institute therapy which will restore the victim to health and military duty in the shortest possible time; and finally, to establish the source of the infection so that its spread to others may be stopped.

Our attention has been called to the fact that occasional instances are occurring where military personnel, for reasons which need not be enumerated here, are presenting themselves to civilian physicians for treatment of venereal or other contagious diseases. While the physician may be well within his ethical rights in accepting such patients, nevertheless it is desirable that he have in mind the consequences which may befall the serviceman who fails to report his infection to the proper military officers. Severe punishment may be meted out to him for not reporting the presence of a venereal infection. Time may be lost in detecting sources or contacts of contagious diseases by the proper authorities, during which others may become infected from the same source. Complications may arise necessitating hospitalization. Furthermore, altitude "blackouts" may occur in air force personnel taking sulfa drugs, which in turn may lead to serious accidents involving innocent persons. Other reasons could be cited, but perhaps these are sufficient to illustrate our point. It must be admitted that the private physician is under no compulsion to divulge confidential medical information,

but, on the other hand, the proper medical military authorities should be advised of the fact whenever an officer or an enlisted man is under treatment for a venereal infection by a civilian physician. There may be certain instances when it is necessary for civilian physicians to treat such persons, but the best interests of all will be served if the medical officers in charge are in possession of the facts.

NATIONAL CONFERENCE ON MEDICAL SERVICE

The seventeenth annual meeting of the National Conference on Medical Service was held in Chicago Sunday, February 14, at the Palmer House. Starting as an informal conference held by representatives from several states in the midwest, this has grown until now doctors from many states attend. One hundred ninety-five persons registered this year, the largest number ever recorded, and a most encouraging indication for the need of medical meetings even in time of war. Dr. J. D. McCarthy of Omaha, president, and Dr. W. L. Burnap of Fergus Falls, Minnesota, secretary, presented a compact and very interesting program.

The morning symposium was entitled Analysis of Current Trends in the Control of Medicine. The first speaker was Dr. R. B. Harrison of New Orleans, secretary of the State Board of Medical Examiners, who discussed the significance of the trends to medical licensure, particularly with regard to the relocation of physicians. He stated that medical examiners must uphold the standards set by medicals schools and not be a party to lowering these standards. He felt universal reciprocity might be a better answer than temporary legislation in regard to licensure, bearing in mind that any graduate of an approved medical school is eligible to reciprocity in most states. The basic science examination is no bar to such graduates. He concluded his talk with the statement that relocation of physicians within the state is a better solution than relocation from one state to another, and it requires no legislation.

Dr. J. B. Robinson of Baltimore, president of the American Dental Association, was the second speaker. He said the problems of dentistry and medicine are fundamentally the same. He felt some form of a national health program may be inaugurated soon and said medicine and dentistry must be ready to occupy a prominent place in such plans. The American Dental Association has set up an office in Washington which stands ready to consult and advise with federal agencies, and it has received an excellent response.

Dr. E. J. Carey of Milwaukee, Dean of Marquette University, presented the next paper on medical education. He said we are all willing to accept centralization of authority, rationing of materiel, and regimentation of personnel, in the war emergency, but we must look to the future and educate the public in health matters. It would be folly to beat the enemy physically and then adopt its social concepts which are diametrically opposed to those for which we are fighting. Speaking specifically of the status of medical students, he explained that they would be enrolled in the army as privates and in the navy as apprentice seamen. They will be asked to resign any commission they now hold in order to do this. These students will be under the authority of the army and navy respectively, will be paid by these services, and allowed to complete their medical training. They will be soldiers or sailors in all respects with the addition that they will be allowed to go to school and complete their medical education and internship. Military, industrial and tropical medicine will be included in their course. The Procurement and Assignment Service has recommended that a minimum faculty be preserved to carry on the educational program. Dr. Carey concluded his talk by saying the war would be a severe test on medical education and medical care.

Dr. C. W. Munger of New York City, chairman of the Council on Government Relations Committee of the American Hospital Association, discussed hospital problems. These included the shortage in hospital staffs of civilian workers, the shortage in nurses, material, supplies, and house staff. The WPB has placed a hospital administrator on its staff and this has been helpful to hospitals making application for material and supplies. He said the hospitals needed a full time bureau of information in Washington, and plans are now under way to make this possible in the near future.

Dr. A. W. Adson of Rochester, Minnesota, chairman of the Medical Advisory Committee of the Division of Social Welfare for the State of Minnesota, gave the final paper on the morning symposium. Dr. Adson stated a unified effort as an allied group is very urgently needed now, as well as a stronger national policy in our own ranks. He said the high standards of medical practice must be maintained, and that medical education is never completed. Education, licensure and practice acts are safeguards for the public, not the profession. He listed the excellent work being carried on by the national organization, but said it has not gained the confidence of the national administrative and legislative bodies. Neither has the National Physicians Committee. He then said it is our duty as physicians to let the national administrative and legislative bodies know we realize our

responsibilities and stand ready to work out the problems.

Following these remarks on national policy, Dr. Adson discussed medical care for the indigent and low income group, reiterating the need for maintaining the patient-physician relationship, the acceptance of responsibility by all parties to such a program, the necessity for a rehabilitation program which would encompass adequate diet, clothing, housing and recreation, and adequate compensation for the physicians.

He closed his talk by returning to the theme of a stronger, more aggressive program by the national office in educating the public and Congress in regard to medicine and medical programs and policies. He felt a national committee should be created for this purpose, composed of physicians from active practice. He believed this work should be done through the American Medical Association if possible; if not through it, then perhaps it could be done through the National Physicians Committee. If both of these were unavailable, he then proposed integrating the work of the state committees on public policy and legislation so that they could speak for the medical profession in Washington.

After a short question and answer period, the meeting recessed for lunch, following which Honorable Harold H. Burton, Senator from Ohio, gave an excellent talk on America Looks Ahead. Senator Burton listed the problems which confront the country today, with the shortages of materials and manpower, and told not only of the need for planning for the immediate future and the winning of the war, but also the need for long range planning and postwar policies.

Dr. J. D. McCarthy gave a short talk on the history of the organization, and at the election of officers, Dr. W. L. Burnap of Fergus Falls, Minnesota, was elected president for 1943-1944, and Dr. C. L. Palmer of Pittsburgh, Pennsylvania, secretary.

A resolution prepared by doctors from seven states in the midwest was presented to the Conference by Dr. R. D. Bernard of Clarion, Iowa. This called for the immediate development of a strong national legislative and economic policy which should be integrated with that of the state committees on public policy and legislation. This resolution is to be presented to the Board of Trustees of the American Medical Association and the House of Delegates of the seven states preparing it. There was a discussion of the resolution and it was adopted by vote.

Another motion was placed before the Conference; namely, that a committee of five be appointed to consult with the Social Security Board in Washington in regard to policies and procedures. This also was adopted.

The afternoon symposium was entitled Medicine in the Postwar Era.

Dr. C. F. Vohs of St. Louis, chairman of the Medical Economics Committee of the Missouri State Medical Association, discussed the extension of the Social Security Program. Dr. Vohs gave detailed figures comparing the Beveridge plan in Great Britain and the proposal for the United States, together with differences in policy. He also discussed medical service plans and how they proposed to meet the situation.

Dr. Rollo K. Packard of Chicago, chairman of the Medical Economics Committee of the Illinois State Medical Society, talked on the return of the medical officer to private practice. The type of practice will depend on what we are willing to fight for; and even with a vigorous fight, it may be some kind of socialized medical care.

Dr. C. H. McCaskey of Indianapolis, Indiana, president of the Indiana State Medical Association, discussed the responsibility to the war veteran. He said 16,000,000 men would be entitled to postwar care, and they might demand the same for their families. This is a strong legislative bloc. He discussed the veterans hospitals now in operation, medical care now available for soldiers and sailors on leave, government insurance for men in service, and vocational training of physically handicapped veterans, and said the medical profession should support a rehabilitation program.

The final paper of the afternoon was given by Dr. R. D. Bernard of Clarion, Iowa, chairman of the Committee on Public Policy and Legislation of the Iowa State Medical Society. Dr. Bernard discussed the expansion of public health, saying public health funds are a part of Social Security. The United States Public Health Service has recruited and trained 700 persons for work in war areas. The venereal disease program has been intensified and attention has been given to tuberculosis and industrial health problems, particularly with reference to the war worker. The National Institute of Health has been geared to the war, and has done much work on typhus and yellow fever vaccine and on certifying blood plasma for distribution. It will become a clearing house for all research work after the war is over. We will also see a vast expansion of maritime and hospital relief, and promotion of local health services. There must be a fine sense of cooperation between the public health officer and private practitioner. There will be no encroachment on the field of clinical medicine by public health officials, who will act in advisory and directory capacities only.

The meeting adjourned at four-thirty.

Red Cross Contributions

For more than a score of years, people in all walks of life have been making annual contributions to support the far-flung work of the American Red Cross. The little Red Cross stickers in countless windows were visual evidence of the nationwide support of, and confidence in, the Red Cross.

During 1942, however, more than 1,000,000 men and women made a new contact with the Red Cross. They were those who each contributed a pint of their blood to the Red Cross Blood Donor Service. Collected at the request of the Army and Navy, this blood is processed into plasma and serum albumin, and today it is being used on the world's battlefields, helping to give our wounded a much better chance at life. Four million donors are needed in 1943.



It may safely be said that the Red Cross Blood Donor Service has opened the eyes of many to the real significance of the Red Cross. Another eye-opener, although not so well known, is the fact that in North Africa, in New Guinea and the Solomons, and wherever else the need arises, surgical dressings made by Red Cross volunteer workers are being used to bind the wounds of those who are out there prepared to give their last full measure of devotion.

On the lighter side of the picture, the Red Cross has established some seventy-five servicemen's clubs and recreation centers in leave areas abroad where our soldiers, taking a respite from their duties, find everything they could desire for a good time: comfortable beds and showers, home cooked food, games and entertainment.

With them also, at home and abroad, are Red Cross field directors, ready to advise and counsel and help unravel any of the many personal and family problems to which soldier and civilian alike are subject.

Despite all the work of the Red Cross on behalf of the serviceman, it continues its activities at home. Instruction in first aid, home nursing and nutrition, assistance to families of servicemen, work in hospitals and in other fields of public welfare, disaster preparedness and relief, and a host of similar activities, keep the organization busier than it ever has been before.

To do all this costs money. In March the Red Cross will raise its 1943 War Fund, and a goal of $125,000,000 has been set. For every dollar contributed there is the assurance that it is wisely spent, that it will help save the lives of our boys and help alleviate suffering everywhere.

NEW DIRECTOR OF MEDICAL AND HEALTH SERVICE

Announcement has been made of the appointment of G. Foard McGinnes, M.D., as Director of Medical and Health Service of the Midwestern Area of the American Red Cross with headquarters in St. Louis. Dr. McGinnes comes to the Red Cross from the Tennessee Department of Public Health where, since 1929, he was Director of Venereal Disease Control Service, Associate Professor of Preventive Medicine of the University of Tennessee College of Medicine, and Chief of the Department of Syphilology, Meharry Medical College. Prior to 1929 he was with the Virginia State Department of Health as Director of the Bureau of Communicable Diseases.



The Use of the Civilian Defense Blood Plasma Reserve In Iowa

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There has been some misinterpretation of the instructions in regard to use of the civilian defense blood plasma and the popular desire to participate in blood donation. The number of agencies involved in the collection, processing and storage of blood plasma has added sufficient confusion to justify some clarification of the situation which exists in Iowa relative to plasma and serum reserves.

While the terms plasma and serum are used somewhat interchangeably, it must be borne in mind that there is a difference. Both are the liquid portion of the blood remaining after the cellular elements are removed. Serum contains proteins and the immune substances, but it has no fibrinogen and is therefore not applicable to treatment of hemorrhage. Both serum and plasma can be used to combat shock. Neither pooled serum nor pooled plasma require preliminary typing, but there are differences in their appearance and in the manner of handling them. Both serum and plasma are being stored in Iowa hospitals, and for purposes of this discussion what is said of plasma applies equally to serum.

The agencies concerned with the collection and processing of plasma reserves in our state can be divided into three groups: the American Red Cross, Office of Civilian Defense, and the State Department of Health, as well as various private institutions and agencies. The purposes and functions of these groups are described, but it must be remembered that since we are in the midst of a great natonal emergency there must be and is close cooperation between these groups and all should work in harmony for the same patriotic end.

A recent communication from the office of Dr. George Baehr, Chief Medical Officer of the Office of Civilian Defense, calls attention to the plasma reserves now available in every civilian defense region for use in the event of casualties resulting from enemy action or sabotage. In cities where reserves are stored, they may be obtained by hospitals through the Local Chief of Emergency Medical Service. They may obtain additional supplies as needed through the State Chief of Emergency Medical Service.

Dr. Baehr's circular (Medical Series No. 25, dated December 21, 1942) states, "These instructions should not be construed to prevent the use of this plasma for life saving purposes in any disaster. If OCD plasma is used in non-war related incidents, its use may be considered as a loan and arrangements may be made later for its replacement."

In line with the above statement, the following excerpt is of interest:

"If OCD plasma is used in disasters, its use is considered a loan by OCD. It is the policy of the American Red Cross to replace it. Stores of OCD plasma may be made available for use by Red Cross during natural disasters and the cost of such replacements, of course, is borne by this organization."

The above paragraph is from a recent letter addressed to Dr. Wallace D. Hunt, Regional Medical Officer, Seventh Civilian Defense Region, Omaha, Nebraska, from Mr. R. C. Edson, Director of Disaster Preparedness and Civilian War Aid for the Midwestern Area of the American Red Cross.

The State University of Iowa has received a grant from the Office of Civilian Defense enabling its laboratory, under the direction of Dr. Elmer L. DeGowin, to prepare 700 units of plasma for OCD uses. Dr. DeGowin has agreed to store 300 of these units in six hospitals, designated by the State Chief of Emergency Medical Service, which are to be used as outlined in Medical Series No. 25.

The American Red Cross has been assigned by the Army and Navy the duty of collecting and processing blood for the armed forces. Blood collected by that agency is processed in a number of laboratories controlled by the Army and Navy near the coast and in some of the larger cities of the Middle West, the nearest one being in Chicago. Most of this blood is converted into dried plasma, which can be kept for longer periods without deterioration due to climatologic or temperature changes and is more convenient for shipment.

At present in Iowa the Red Cross has not solicited blood donors for the armed forces, and no agency other than the Red Cross is authorized to

collect blood for the armed forces. Blood has not been solicited by the Red Cross because of the distance from the processing laboratory, and the thirty-one donor centers in the United States have been meeting the army and navy quota. Unless the war is prolonged or unforeseen needs arise, the supply for such purposes is adequate. Some of the reserve is available to replace Civilian Defense reserves when these are depleted by major disasters.

In Iowa the Civilian Defense organization, or the Emergency Medical Service, has no machinery wherewith to process blood except for the 700 units processed under the direction of Dr. DeGowin at the State University of Iowa, as was previously stated. Any additional processed blood needed by OCD will be obtained through the wholehearted cooperation of Dr. Walter L. Bierring, State Commissioner of Health, and his coworkers in the State Department of Health, and the generous assistance of the hospitals and other private institutions and agencies in the state.

While the use of pooled blood plasma in private practice is much to be encouraged and adequate reserves are an asset to the medical profession and people of Iowa, the Office of Civilian Defense and Emergency Medical Service are primarily concerned with the securement and storage of sufficient supplies for major disasters or war connected casualties. The State Department of Health, on the other hand, has as a primary responsibility the obligation of maintaining adequate supplies for purely civilian needs, but with the close and harmonious relationship existing between the two agencies there can be effected in time of need a rapid and efficient interchange of functions.

The giving of blood is not as simple a matter as the contribution of money to a good cause. No matter how ready and willing the donor, it is useless to collect blood until arrangements have been made for its prompt transportation to a suitably equipped laboratory. There it must be tested and processed under aseptic conditions by a most exacting technic and then retested both culturally and by use on test animals to ascertain its safety. Obviously, it is not economical to handle small amounts.

The Serum Plasma Center of the State Department of Health, with its somewhat limited facilities, collects blood from large donor groups in various parts of the state to the limit of its capacity for processing, but it cannot respond to calls in any particular vicinity without considerable previous notice.

The plasma as processed by the Department of Health is available for use in indigent persons regardless of war connections with their needs. However, a considerable reserve is being built up and stored in various strategic cities to be used by the Office of Civilian Defense under the direction of the State Chief of Emergency Medical Service and the county chiefs. This reserve also will be drawn upon for replacement of hospital and other supplies in case of major or war related incidents.

A number of foundations, organizations, and individuals are promoting voluntary donor campaigns. Few of these have facilities for processing blood and must depend upon the agencies already mentioned and those about to be described.

While the processing of blood is a technically difficult and exacting procedure, it is not beyond the capabilities of most trained laboratory technicians. Most hospitals have prepared blood for their own use for years but lack the equipment necessary for doing it on a large scale, and there is a grave shortage of adequately trained personnel. However, hospitals are encouraged to build a plasma reserve, and some eight or ten of them, exclusive of the University Hospitals, have already done so. Assistance in procuring priorities on equipment will be given by the OCD to others who desire to aid this program, and all hospitals are encouraged to participate in an exchange of facilities and of plasma reserve in emergencies under the direction of the Local Chief of Emergency Medical Service.

Hospitals having no laboratory equipment may yet share in the blood bank for their own advantage and for the general good. By arrangement with Dr. Carl F. Jordan, Director of the Serum Plasma Center of the State Department of Health, hospital staff doctors or administrators may send, in containers of approved type, small amounts of blood (4 to 8 containers) which will be processed at a nominal price to cover actual cost and the plasma returned to the hospital for storage and use.

In any event, it is important to the war effort that the State Chief of Emergency Medical Service be advised of the amount of blood on hand and available in a major disaster and of the facilities existing for the processing of blood.

It will facilitate matters and obviate much confusion if all agencies interested in the processing of blood or obtaining blood donors would coordinate their efforts through the chiefs of Emergency Medical Service so that the donor supply would not exceed the capacity of the laboratory for handling it and yet maintain a steady flow of the life giving fluid for which there might be at any time a grave need.

County Chiefs of Emergency Medical Service should acquaint themselves with local supplies and facilities and transmit such information to the State Chief. It is their responsibility to see that adequate reserves, if not on hand in their area, are promptly available.

Bleeding clinics, regardless of the auspices under which they are organized, should be arranged through the County Chief of Emergency Medical Service, who, by conference with the Director of the Serum Plasma Center of the State Department of Health, can arrange a date for mass bleeding at a time convenient for the laboratory. The State Chief of Emergency Medical Service should be advised of all proposed clinics.

The State Chief of Emergency Medical Service, the American Red Cross and the State Commissioner of Health advise that volunteer blood donors register in the volunteer office of Civilian Defense in each county; and where such an office has not been established they can register with the Local Chief of Emergency Medical Service. Such registration would furnish the American Red Cross with a list of available donors in case they would require additional blood for the military needs; it would give a list of donors to be used to fill the requirements of OCD in any major emergency; and it would also give a sufficient number of donors who would be available to meet the needs of the local civilian population for whole blood, or plasma or serum. After the blood has been collected, the individual type of each donor can be added to the local register.

Any misstatement of fact to the effect that blood collected is to be used exclusively or even probably for the armed forces only serves to discredit the program and discourage donors, many of whom offered blood months ago and do not understand why it has not been taken. Obviously, it is wasteful of time, effort and money, not to speak of rubber expended in travel, to conduct a clinic for a mere handful of donors.

Blood is needed. Much blood is needed, not only for our soldiers but for civilian casualties, but it cannot be procured without time consuming procedures. Any donor desiring to give blood for the cause of Democracy may be assured that his blood will be used to save lives endangered in war related disasters. Surely no one would be so hard as to refuse his blood to any moribund victim of accident or disease, especially if the injury were due to enemy action or sabotage, whether or not the person wore a uniform. Patience and cooperation are the best ways in which we can help build an adequate blood bank for our state.

CONGRESS ON MEDICAL EDUCATION AND LICENSURE

(Continued from page 116)

the southwest Pacific are fighting although 70 per cent are actively infested with malaria. The fact that they remain on their feet is a splendid commentary to the medical personnel with them. The things we learn in that area can be used as a pattern for future training. The same will be true of the diseases in Africa; and they are numerous there, including typhus, malaria, dysentery, sand fly fever, and plague.

Admiral McIntire said the navy is now operating on less than five doctors per one thousand sailors. It is his opinion that many doctors will not return to civil life, due to the fact that the army and navy will be large and will require many doctors, and due also to the fact that there will be much work to be done in many sections of the world. A great deal of emphasis should be placed on epidemiology, and trained teams should be formed which can be sent to foreign countries. In closing, Admiral McIntire stressed again the need for formulating some program of medical care for all people under conditions which they can afford. He discarded government medicine as the plan of choice, and urged the doctors to be ready to assume the responsibility for some plan.

Dr. Harold S. Diehl of Minneapolis discussed medical education as related to the Procurement and Assignment Service. He stressed the difficulty of maintaining faculties in the medical schools and the problems posed by the new Army-Navy program of enlisting students and having them continue their medical education. Although the deans of medical schools voted to reduce premedical training to two years, they are opposed to less than this and feel that five terms of twelve weeks each is too short for the training. He explained that premedical students are now deferred to June, 1943.

Dr. Donald C. Balfour of Rochester, Director of the Mayo Foundation for Medical Education and Research, discussed graduate education and the war, outlining the standards of medical education, the principles of graduate medical education which should be followed, and concluding with the statement that possibly graduate medical education was being overdone.

Dr. Robin C. Buerki discussed Dr. Balfour's paper briefly, saying there was a real danger of overdoing graduate medical education. He said 70 to 80 per cent of the medical students want graduate education, but only 19 per cent can be accommodated. He suggested that rehabilitation of the family doctor may be the answer, which

means we might have a specialty board for such doctors after a certain number of years of practice to certify they have kept up with new advances in medicine.

Dr. Thomas C. Routley of Toronto, Ontario, secretary of the Canadian Medical Association, discussed the mobilization of Canada's health resources for the war. He brought out the fact that 32 per cent of Canada's doctors are in military service compared to 12 per cent of our own, and said that civilian needs have been encroached upon by the demands of the armed forces. He explained their procedure, which closely resembles that of our Procurement and Assignment Service, and said the Canadian Medical Association has the full support of the Canadian government.

Brigadier General Joseph N. Dalton of Washington, Assistant Chief of Staff for Personnel of the United States Army, said the army and medicine are alike in their interest in personnel and in realizing the need for continuing education. He said lowering the draft age to eighteen has made possible a long range education program for the army. However, it has no intention of short-cutting medical education, but merely hopes to compress it as much as possible. There is no such thing as a partially trained doctor. The medical students will be soldiers taking college work; they will be under army supervision and receive army pay. The army program will be based on twelve week terms; the premedical work will consist of sixty weeks containing the same amount of work and the high standards now required. The curriculum will be unchanged and the period of internship will not be shortened. He said the army needs the help of the medical profession in the screening and selection of students, and also to serve on advisory boards.

Colonel Fitts of the army said there will be no more doctors or dentists called from civilian life after 1943 because there will be none available. He said the armed forces will have to rely on the groups now being trained.

Chancellor Edward C. Elliott, Chief of the Professional and Technical Employment and Training Division of the War Manpower Commission, spoke next on education and the war, saying the schools have helped in every program of the war, but there is a shortage of trained workers, and also of teachers. He said we may muddle through if this is a short war, but a long war will find us very short in many respects. All able-bodied youths are destined for the armed forces. The responsibility for determining the special training of such students is a function of the army and navy. About 300,000 young men will be trained each year under the program. Youths are a physical force in the war effort, but they are also the hope of peace for the future.

Thomas Parran, Surgeon General of the United States Public Health Service, gave an excellent talk, partly a review of the work of the last year in preventing diseases which usually go hand in hand with war, and also on the future outlook. He felt it is possible to make food rationing a definite health asset under a nutrition program. He mentioned the work being done among war workers and in industrial areas, giving special consideration to boom areas where many shortages exist. He said the problem of providing physicians for such areas is primarily the responsibility of the state Procurement and Assignment Service, but as a last resort the Public Health Service may commission a medical officer and send him in to look after community health, not to practice clinical medicine. He mentioned new activities of the Public Health Service in providing medical care to the coast guard and merchant marine, and told of the work the National Institute of Health is doing, all of it directly related to the war effort.

Colonel George F. Lull of Washington, representing the Surgeon General of the United States Army, gave figures on medical officers in the army and said the army will continue to grow and demand more medical officers. He also said the American soldier is receiving the finest type of medical care. The army has tried to place the doctors where they can use their ability most efficiently, and in most instances has succeeded.

REFRESHER COURSE IN LARYNGOLOGY, RHINOLOGY AND OTOLOGY

The University of Illinois College of Medicine has announced a refresher course in laryngology, rhinology and otology to be held at the University March 22 to 27, inclusive. This didactic and clinical course has been arranged to meet the needs of ear, nose and throat specialists who, under existing conditions, are able to devote only a brief period to postgraduate review and study. The registration is limited and the fee for the complete course is $50.00. When requesting application for registration, the applicant should state his school, year of graduation, and also give details concerning speciality training and experience.

All correspondence should be addressed to the Department of Otolaryngology, University of Illinois College of Medicine, 1853 Polk Street, Chicago, Illinois.

HOTEL RESERVATIONS should be made early for the annual meeting since there is a shortage of hotel rooms in Des Moines.

Roster of Iowa Physicians in Military Service

As of February 20, 1943

Adair County

Cornell, D. D., Greenfield (APO San Francisco, Cal.) Capt., A.U.S.
Gantz, A. J., Greenfield (APO Los Angeles, Cal.) Capt., A.U.S.

Adams County

Willett, W. J., Carbon (Camp Maxey, Tex.) Capt., A.U.S.

Allamakee County

Hogan, P. W., Waukon
Ivens, M. H., Waukon (Camp Shelby, La.)
Kiesau, M. F., Postville (Fort Leonard Wood, Mo.)
Rominger, C. W., Waukon

Appanoose County

Edwards, R. E., Centerville (Fort Dix, N. J.) 1st Lt., A.U.S.
Huston, M. D., Centerville (Lowry Field, Colo.) Capt., A.U.S.

Audubon County

Koehne, F. D., Audubon (Oroville, Wash.)

Benton County

Koontz, L. W., Vinton (Carmel, Cal.) Capt., A.U.S.
Senfeld, Sidney, Belle Plaine

Black Hawk County

Bickley, D. W., Waterloo (Camp Barkeley, Texas) 1st Lt., A.U.S.
Bickley, J. W., Waterloo (Fort Sill. Okla.) 1st Lt., A.U.S.
Butts, J. H., Waterloo (Memphis, Tenn.) Lt. Comdr., U.S.N.R.
Cooper, C. N., Waterloo (Seattle, Wash.) Lt. Comdr., U.S.N.R.
Ellyson, C. D., Waterloo (Norfolk, Va.) Lt. (jg) U.S.N.R.
Hartman, H. J., Waterloo (Fort Lewis, Wash.) Capt., A.U.S.
Henderson, L. J., Cedar Falls (Fort Ord, Cal.) Capt., A.U.S.
Hoyt, C. N., Cedar Falls (McClellan Field, Ala.) 1st Lt., A.U.S.
Ludwick, A. L., Waterloo (APO New York, N. Y.) Capt., A.U.S.
Marquis, F. M., Waterloo (Camp Robinson, Ark.) Capt., A.U.S.
O'Keefe, P. T., Waterloo (Camp Blanding, Fla.) Capt., A.U.S.
Paige, R. T., LaPorte City (Des Moines, Ia.) Lt. Comdr., U.S.N.R.
Rohlf, E. L., Jr., Waterloo (APO New York, N. Y.) 1st. Lt., A.U.S.
Seibert, C. W., Waterloo (Fort Wright, Wash.) Capt., A.U.S.
Smith, E. E., Waterloo (Scott Field, Ill.) Major, A.U.S.
Smith, R. I., Waterloo (Reno, Nevada) 1st Lt., A.U.S.
Smith, R. G., Cedar Falls (APO New York, N. Y.) Capt., A.U.S.
Trunnell, T. L., Waterloo (care P.M., New York, N. Y.) Lt. (jg), U.S.N.R.

Boone County

Brewster, E. S., Boone (Camp Chaffee, Ark.) Major, A.U.S.
Healy, M. D., Boone
Shane, R. S., Pilot Mound (Des Moines, Ia.) Lt. Col., A.U.S.

Bremer County

Amlie, P. J., Tripoli (Des Moines, Ia.)
Blum, O. S., Waverly (Bremerton, Wash.) Lt., U.S.N.R.
Rathe, H. W., Waverly (Fort Jackson, S. C.) Capt., A.U.S.

Buchanan County

Barton, J. C., Independence (Omaha, Neb.) Capt., A.U.S.
Leehey, P. J., Independence (APO San Francisco, Cal.) Capt., A.U.S.
Loeck, J. F., Aurora (Camp Hood, Texas) Capt., A.U.S.

Buena Vista County

Almquist, R. E., Albert City (Camp Shelby, Miss.) Capt., A.U.S.
Brecher, P. W., Storm Lake (Camp White, Ore.) Major, A.U.S.
Mailliard, R. E., Storm Lake (Watertown, N. Y.) Major, A.U.S.
Shope, C. D., Storm Lake (Fort Des Moines, Ia.) 1st Lt., A.U.S.
Witte, H. J., Storm Lake (Fort Robinson, Neb.) Capt., A.U.S.

Butler County

Anderson, B. V., Greene (Kansas City, Mo.)
James, R. O., Allison (Mare Island, Cal.)
Rolfs, F. O., Parkersburg (Springfield, Mo.)

Calhoun County

Grinley, A. V., Rockwell City (APO New York, N. Y.) 1st Lt., A.U.S.
Hobart, F. W., Lake City (Camp Grant, Ill.) Capt., A.U.S.
Peek, L. H., Lake City (Jefferson Barracks, Mo.) Capt., A.U.S.
Stevenson, W. W., Rockwell City (San Francisco, Cal.) Lt. Comdr., U.S.N.R.
Weyer, J. J., Lohrville (Camp Carson, Colo.) 1st Lt., A.U.S.

Carroll County

Anneberg, A. R., Carroll (Camp Barkeley, Texas)
Anneberg, W. A., Carroll
Cochran, J. L., Carroll (Gulfport, Miss.)
Cross, D. L., Coon Rapids Lt., U.S.N.R.
Freedland, Maurice, Coon Rapids
Morrison, J. R., Carroll (Camp Maxey, Texas)
Morrison, R. B., Carroll (Muroc, California) 1st. Lt., A.U.S.
Pascoe, P. L., Carroll (Bowman Field, Ky.)
Scannell, R. C., Carroll (APO, New York, N. Y.)
Tindall, R. N., Coon Rapids
Wyatt, M. R., Manning (Carlisle Barracks, Penn.)

Cass County

Egbert, D. S., Atlantic (Fort Snelling, Minn.) Major, A.U.S.
Longstreth, C. M., Atlantic (Norman, Okla) Lt. Comdr., U.S.N.R.
Needles, R. M., Atlantic (Camp Polk, La.) 1st Lt., A.U.S.
Petersen, M. T., Atlantic (Camp Gruber, Okla.) Capt., A.U.S.

Cedar County

Mosher, M. L., West Branch (Camp Gruber, Okla.) Capt., A.U.S.
O'Neal, H. E., Tipton (Pine Camp, N. Y.) Major, A.U.S.

Cerro Gordo County

Adams, C. O., Mason City (Brigham City, Utah)
Egloff, W. C., Mason City (Mesa, Ariz.)
Flickinger, R. R., Mason City (Carlisle Barracks, Penn.) 1st. Lt.. A.U.S.
Hale, A. E., Mason City (Camp Hale, Colo.)
Harris. R. H., Mason City (Columbus, Ohio)
Harrison, G. E., Mason City (Boston, Mass.) Col., A.U.S.
Houlahan, J. E., Mason City (Sacramento, Cal.)
Lannon, J. W., Clear Lake (Carlisle Barracks, Penn.)
Long, D. L., Mason City (Santa Ana, Cal.)
Marinos, H. G., Mason City (APO San Francisco, Cal.)
Sternhill, Irving, Mason City (APO New York, N. Y.)

Cherokee County

Bullock, G. D., Washta (Camp Livingston, La.) Capt., A.U.S.
Ihle, C. W., Jr., Cleghorn (Fort Leonard Wood, Mo.) Capt., A.U.S.
Noble, R. P., Cherokee (Rapid City, S. Dak.) Capt., A.U.S.
Swift, C. H., Jr., Marcus (Fort Bliss, Texas) Capt., A.U.S.

Chickasaw County

Caulfield, J. D., New Hampton (Denver, Colo.) Capt., A.U.S.
Murphey, A. L.. Fredericksburg (APO New Orleans, La.) Capt., A.U.S.
O'Connor, E. C., New Hampton (Camp Crowder, Mo.) Capt., A.U.S.
Richmond, P. C., New Hampton (Camp Gruber, Okla.) Capt. A.U.S.

Clay County

Adams, G. W., Royal (Fort Clayton, Panama Canal Zone)
Edington, F. D., Spencer (Lowry Field, Colo.) Lt. Col., A.U.S.
Jones, C. C., Spencer (Fleet PO, San Francisco, Cal.) Lt., U.S.N.R.
King, D. H., Spencer (Spokane, Wash.) Capt., A.U.S.

Clayton County

Anderson, H. M., Strawberry Point (Camp Crowder, Mo.) 1st Lt., A.U.S.
Rhomberg, E. B., Guttenberg (Camp Wallace, Texas) Capt.,A.U.S.

Clinton County

Ellison, G. M., Clinton (Washington, D. C.) 1st Lt., A.U.S.
Hill, D. E., Clinton
King, R. C., Clinton (Camp Chaffee, Ark.)
Meyer, A. K., Clinton (Denver, Colo.)
Norment, J. E., Clinton (Mare Island, Cal.)
Riedesel, E. V., Wheatland (Fort Douglas, Utah)
Snyder, D. C., De Witt
Van Epps, E. F., Clinton
Waggoner, C. V., Clinton (Seattle, Wash.) Lt. Cmdr., U.S.N.R.

Crawford County

Fee, C. H., Denison (Bowman Field, Ky.)
Maire, E. J., Vail (San Francisco, Cal.)
Wetrich, M. F., Manilla

Dallas-Guthrie Counties

Fail. C. S., Adel (Farragut Air Base, Idaho) U.S.N.R.
Margolin, J. M., Perry (Camp Chaffee, Ark.) A.U.S.
Nicoll, C. A., Panora (Camp Chaffee, Ark.) Capt., A.U.S.
Osborn, C. R., Dexter (San Francisco, Cal.) Lt. (jg), U.S.N.R.
Todd, D. W., Guthrie Center (Camp McCoy, Wis.) 1st Lt., A.U.S.
Wilke, F.A., Woodward (APO New York, N. Y.)

Decatur County

Doss, W. N., Leon (APO San Francisco, Cal.)
Gamet, E. E., Lamoni (Tacoma, Wash.)

Delaware County

Baumgarten, Oscar, Earlville (APO Los Angeles, Cal.)
Clark, R. E., Manchester (Fort Riley, Kan.) 1st Lt., A.U.S.

Des Moines County

Eigenfeld, M. L., Burlington (Camp Robinson, Ark.) 1st. Lt., A.U.S.
Heitzman, P. O., Burlington (Fort Leonard Wood, Mo.)
Jenkins, G. D., Burlington (West Point, N. Y.) Lt. Col. A.U.S.
Lohmann, C. J., Burlington (Fort Lewis, Wash.)
McKitterick, J. C., Burlington (Davisville, R. I.)
Moerke, R. F., Burlington (Abilene, Texas)

Dickinson County

Buchanan, J. J., Milford (Great Lakes, Ill.) Lt. Comdr., U.S.N.R.
Henning, G. G., Milford (Camp Pickett, Va.) Capt., A.U.S.
Nicholson, C. G., Spirit Lake (Sawtelle, Cal.) Capt., A.U.S.
Rodawig, D. F., Spirit Lake (Fort Hancock, N. J.) Capt., A.U.S.

Dubuque County

Beddoes, M. G., Cascade (Kansas City, Mo.) Capt., A.U.S.
Conzett, D. C., Dubuque (Fort Riley, Kan.) Major, A.U.S.
Cunningham, J. C., Dubuque (Meridian, Miss.) Capt., A.U.S.
Edstrom, Henry, Dubuque (Clinton, Iowa) Major, A.U.S.

Entringer, A. J., Dubuque (APO San Francisco, Cal.) ..... Capt., A.U.S.
Hall, C. B., Dubuque (San Antonio, Texas) ..... 1st Lt., A.U.S.
Knoll, A. H., Dubuque (San Francisco, Cal.) .... Major, A.U.S.
Langford, W. R., Epworth (Rapid City, S. Dak.) .. Capt., A.U.S.
Lavery, H. B., Dubuque (Washington, D. C.) .... Lt. Col., A.U.S.
Leik, D. W., Dubuque (Douglas, Ariz.) ..... 1st Lt., A.U.S.
Mueller, J. J., Dubuque (Hattiesburg, Miss.) .... 1st Lt., A.U.S.
Olson, P. F., Dubuque (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Painter, R. C., Dubuque (care PM, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Paulus, J. W., Dubuque (Camp Merced, Cal.) .... 1st Lt., A.U.S.
Plankers, A. G., Dubuque (APO New York, N. Y.) Major, A.U.S.
Quinn, F. P., Dubuque (Carlisle Barracks, Penn.) . Major, A.U.S.
Scharle, Theodore, Dubuque (Fort Lawton, Wash.) Capt., A.U.S.
Schueller, C. J., Dubuque (Camp Barkeley, Texas) 1st Lt., A.U.S.
Sharpe, D. C., Dubuque (Fort Leonard Wood, Mo.) .. Capt., A.U.S.
Smith, C. W., Dubuque (care PM, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Steffens, L. F., Dubuque (Camp Chaffee, Ark.) .. Lt. Col., A.U.S.
Straub, J. J., Dubuque (care PM, San Francisco, Cal.) ..... Lt., U.S.N.R.
Ward, D. F., Dubuque (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.

Emmet County

Clark, J. P., Estherville (Fort Sam Houston, Texas) ..... Capt., A,U.S.
Miller, O. H., Estherville (Gowen Field, Idaho) ..... Lt. Comdr., U.S.N.R.

Fayette County

Belding, Leland, Waucoma
Camp, D. E., West Union (Camp Blanding, Fla.) ... Capt., A.U.S.
Gallagher, J. P., Oelwein (San Diego, Cal.)
Henderson, W. B., Oelwein (Jefferson Barracks, Mo.)
Hess, A. M., West Union (Randolph Field, Texas) ..... 1st Lt., A.U.S.
Moen, H. P., West Union (Denver, Colo.)
Sulzbach, John, Oelwein

Floyd County

Baltzell, W. C., Charles City (Camp McCoy, Wis.) .. Capt., A.U.S.
Flater, N. C., Floyd (Rockford, Ill.) ..... Capt., A.U.S.
Knight, R. A., Rockford (San Diego, Cal.) ..... Lt., U.S.N.R.
Mackie, D. G., Charles City (Topeka, Kan.) .... 1st Lt., A.U.S.
Miner, J. B., Jr., Charles City (San Francisco, Cal.) Lt., U.S.N.R.
Tolliver, H. A., Charles City (Fort Cronkhite, Cal.) Capt., A.U.S.

Franklin County

Byers, W. L., Sheffield (Jefferson Barracks, Mo.) . 1st Lt., A.U.S.
Hedgecock, L. E., Hampton (care PM, San Francisco, Cal.) ..... Lt., U.S.N.R.
Randall, W. L., Hampton (Great Lakes, Ill.) ..... Lt., U.S.N.R.
Walton, S. G., Hampton (Camp Robinson, Ark.) 1st Lt., A.U.S.

Fremont County

Kerr, W. H., Hamburg (Camp Phillips, Kan.) .... Capt., A.U.S.
Marrs, W. D., Tabor (APO, New York, N. Y.) .. 1st Lt., A.U.S.
Wanamaker, A. R., Hamburg (Los Angeles, Cal.) .. Capt., A.U.S.

Greene County

Cartwright, F. P., Grand Junction (Casper, Wyo.) Capt., A.U.S.
Castles, W. A., Jr., Rippey (APO San Francisco, Cal.) ..... Capt. A.U.S.
Hanson, L. C., Jefferson (Camp Rucker, Ala.) ... 1st Lt., A.U.S.
Jongewaard, A. J., Jefferson (St. Louis, Mo.) ..... U.S.N.R.
Limberg, J. I., Jr., Jefferson (APO San Francisco, Cal.) ..... Capt., A.U.S.
Lohr, P. E., Churdan (San Diego, Cal.) ..... A.U.S.

Grundy County

Rose, J. E., Grundy Center (Norman, Okla.) Lt. Comdr., U.S.N.R.

Hamilton County

Buxton, O. C., Webster City (March Field, Cal.) .. 1st Lt., A.U.S.
Howar, B. F., Jewell (APO New York, N. Y.) ..... Capt., A.U.S.
James, D. W., Kamrar (Camp Livingston, La.) .... Capt., A.U.S.
Lewis, W. B., Webster City (Camp Young, Cal.) .. Capt., A.U.S.
Mooney, F. P. Jewell (APO New York, N. Y.)
Paschal, G. A., Williams (Camp Barkeley, Texas) .. Capt., A.U.S.
Patterson, R. A., Webster City (San Diego, Cal.) ..... Lt. Comdr., U.S.N.R.
Ptacek, J. L., Webster City (Sheppard Field, Texas)
Thompson, E. D., Webster City (Biloxi, Miss.) .. Capt., A.U.S.

Hancock-Winnebago Counties

Dolmage, G. H., Buffalo Center (Camp Robinson, Ark.) ... A.U.S.
Dulmes, A. H., Klemme (Camp Lewis, Wash.) .... Capt., A.U.S.
Eller, L. W., Kanawha (Fort Leonard Wood, Mo.) ..... A.U.S.
Shaw, D. F., Britt (Long Beach, Cal.)
Thomas, C. W., Forest City (Camp Crowder, Mo.) .. Capt., A.U.S.

Hardin County

Houlihan, F. W., Ackley (Iowa City, Iowa) ..... U.S.N.R.
Jansonius, J. W., Eldora (Vancouver, Wash.) ..... A.U.S.
Johnson, R. J., Iowa Falls (Fort Bliss, Texas) .. Capt., A.U.S.
Johnson, W. A., Alden (Pendleton, Ore.)
Shurts, J. J., Eldora (Camp Roberts, Cal.) ..... 1st Lt., A.U.S.
Todd, V. S., Eldora (Abilene, Texas)

Harrison County

Bergstrom, A. C., Missouri Valley (Camp Robinson, Ark.)
Byrnes, C. W., Dunlap (Jefferson Barracks, Mo.)
Heise, C. A., Jr., Missouri Valley
Tamisiea, F. X., Missouri Valley (Jefferson Barracks, Mo.) ..... 1st Lt., A.U.S.

Henry County

Brown, W. B., Mount Pleasant (Ft. Devens, Mass.) . Capt., A.U.S.
Gloeckler, B. B., Mount Pleasant (Fort Myers, Fla.) Capt., A.U.S.
Hartley, B. D., Mount Pleasant (Yuma, Ariz.) .... Capt., A.U.S.
Megorden, W. H., Mount Pleasant (Ogden, Utah) 1st Lt., A.U.S.
Ristine, L. P., Mount Pleasant (Sioux Falls, S. Dak.) ..... Major, A.U.S.

Howard County

Buresh, Abner, Lime Springs (San Diego, Cal.)
Nierling, P. A., Cresco (Camp Polk, La.) ..... 1st Lt., A.U.S.

Humboldt County

Arent, A. S., Humboldt (Stockton, Cal.) ..... 1st Lt., A.U.S.
Coddington, J. H., Humboldt (Fresno, Cal.) ..... 1st Lt., A.U.S.

Ida County

Dressler, J. B., Ida Grove (Omaha, Neb.) ..... 1st Lt., A.U.S.
Harris, H. H., Battle Creek (Omaha, Neb.) .... 1st Lt., A.U.S.
Martin, J. W., Holstein (Montgomery, Ala.) ..... Capt., A.U.S.

Iowa County

McDaniel, J. D., Marengo (Fort Clark, Texas) ..... A.U.S.
Miller, D. F., Williamsburg (Farragut, Idaho) ..... Lt., U.S.N.R.

Jackson County

Swift, F. J., Jr., Maquoketa (Fort Bragg, N. C.) .. Major, A.U.S.

Jasper County

Doake, Clarke, Newton ..... 1st Lt., A.U.S.
Minkel, R. M., Newton (APO New York, N. Y.) 1st Lt., A.U.S.
Ritchey, S. J., Newton ..... Major, A.U.S.

Jefferson County

Castell, J. W., Fairfield (APO New York, N. Y.) Capt., A.U.S.
Gittler, Ludwig, Fairfield (APO New York, N. Y.) . Major, A.U.S.
Graber H. E., Fairfield (Carlisle Barracks, Penn.) Major, A.U.S.
James, L. D., Fairfield (Camp Dodge, Iowa) .... Lt. Col., A.U.S.
Taylor, I. C., Fairfield (Washington, D. C.) .... 1st Lt., A.U.S.

Johnson County

Agnew, J. W., Iowa City (Camp Phillips, Kan.) .. 1st Lt., A.U.S.
Allen, J. H., Iowa City (Scott Field, Ill.) ..... Capt., A.U.S.
Boiler, W. F., Iowa City (Fort Leonard Wood, Mo.) ..... Major, A.U.S.
Boyd, E. J., Iowa City (Colorado Springs, Colo.) . 1st Lt., A.U.S.
Brinkhous, K. M., Iowa City (Ann Arbor, Mich.) . Lt. Col., A.U.S.
Callahan, G. D., Iowa City (El Toro, Cal.) ..... Lt., U.S.N.R.
Cooper, W. K., Iowa City (Jefferson Barracks, Mo.) Capt., A.U.S.
Crowell, E. A., Iowa City (Spokane, Wash.) .. 1st Lt., A.U.S.
Diddle, A. W., Iowa City (Key West, Fla.) .. Lt. (jg), U.S.N.R.
Dorner, R. A., Iowa City (APO New York, N. Y.) . 1st Lt., A.U.S.
Elmquist, H. S., Iowa City (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Emmons, M. B., Iowa City (Fort Sam Houston, Texas) ..... 1st Lt., A.U.S.
Flynn, J. E., Iowa City (Hot Springs, Ark.) ..... A.U.S.
Fourt, A. S., Iowa City (APO New York, N. Y.) .. Col., A.U.S.
Francis, N. L., Iowa City (Annapolis, Md.) Lt. (jg), U.S.N.R.
Galinsky, L. J., Oakdale (Camp Crowder, Mo.) ..... Capt., A.U.S.
Garlinghouse, R. O., Iowa City (Fort Snelling, Minn.) .. A.U.S.
Hardin, R. C., Iowa City (APO New York, N. Y.) ..... A.U.S.
Harris, K. S., Iowa City (Camp Crowder, Mo.) ..... A.U.S.
Hartung, Walter, Iowa City (Fort Des Moines, Iowa) .. A.U.S.
Irwin, R. L., Iowa City (Iowa City, Iowa) .. Lt. Comdr., U.S.N.R.
January, L. E., Iowa City (Davis-Monthan Field, Ariz.) ..... 1st Lt., A.U.S.
Keisler, H. D., Iowa City (Camp Barkeley, Tex.) .. 1st Lt., A.U.S.
Lage, R. H., Iowa City (Santa Barbara, Cal.) ..... Lt., U.S.N.R.
Longwell, F. H., Iowa City (APO New York, N. Y.) . Capt., A.U.S.
Nagyfy, S. F., Iowa City (Memphis, Tenn.) ... Lt. (jg), U.S.N.R.
Newman, R. W., Iowa City (Fleet PO, New York, N. Y.) ..... Lt., U.S.N.R.
Paulus, E. W., Iowa City (APO New York, N. Y.) ..... A.U.S.
Petersen, V. W., Iowa City (APO New York, N. Y.) ..... Major, A.U.S.
Sells, R. L., Jr., Iowa City (Hamilton Field, Cal.) . 1st Lt., A.U.S.
Smith, H. F., Iowa City (Great Lakes, Ill.) . Lt. Comdr., U.S.N.R.
Springer, E. W., Iowa City (APO San Francisco, Cal.) ..... 1st. Lt., A.U.S.
Stadler, H. E., Iowa City (Fort Harrison, Ind.) .. 1st Lt., A.U.S.
Staggs, W. A., Iowa City (Camp Robinson, Ark.) .. 1st Lt., A.U.S.
Stephens. R. L., Iowa City (Orlando, Fla.) ..... Capt., A.U.S.
Stump, R. B., Iowa City (Fort Leonard Wood, Mo.) .. A.U.S.
Titus, E. L., Iowa City (Fort Wright, N. Y.) .... Col., A.U.S.
Vest, W. M., Iowa City (Fort Ord, Cal.) ..... Capt., A.U.S.
Ziffren, S. E., Iowa City (Springfield, Mo.) .... 1st. Lt., A.U.S.

Junior Members

Adams, M. P., Iowa City
Ahrens, J. H., Iowa City (APO San Francisco, Cal.) ..... A.U.S.
Ball, A. L., Iowa City (Camp Polk, La.) ..... Major, A.U.S.
Barrent, M. E., Iowa City (Camp Tyson, Tenn.) .. Capt., A.U.S.
Black, N. M., Iowa City (McChord Field, Wash.) 1st Lt., A.U.S.
Blair, J. D., Iowa City (APO San Francisco, Cal.) . Major, A.U.S.
Boyd, R. J., Iowa City (Spokane, Wash.) ..... Capt., A.U.S.
Brintnall, E. S., Iowa City (Colorado Springs, Colo.) ..... 1st Lt., A.U.S.
Burr, S. P., Iowa City (APO San Francisco, Cal.) . 1st Lt., A.U.S.
Connole J. F., Iowa City (Camp Bowie, Texas) .. 1st Lt., A.U.S.
Couch, O. A., Iowa City (Camp Van Dorn, Miss.) .. 1st Lt., A.U.S.
Decker, C. E., Iowa City (Oklahoma City, Okla.) .. 1st Lt., A.U.S.
Donnelly B. A., Iowa City (APO San Francisco. Cal.) ..... 1st Lt., A.U.S.
Ehrenhaft, J. L., Iowa City (March Field, Cal.) .. 1st Lt., A.U.S.
Englerth, F. L., Iowa City (APO San Francisco, Cal.) ..... Capt., A.U.S.
Freiberg. M., Iowa City (Jefferson Barracks, Mo.) ..... A.U.S.
Glassman A. L., Iowa City (Palm Springs, Cal.) 1st Lt., A.U.S.

Gilliland, C. H., Iowa City (Great Lakes, Ill.) Lt. (jg), U.S.N.R.
Hamilton, H. E., Iowa City (Chicago, Ill.).....1st Lt., A.U.S.
Harms, G. E., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Ide, L. W., Iowa City (Fort Warren, Wyo.).....1st Lt., A.U.S.
Jacobs, C. A., Iowa City (APO New York, N. Y.).Major, A.U.S.
Keil, P. G., Iowa City (Sioux City, Iowa).....1st Lt., A.U.S.
Kelberg, M. R., Iowa City (Treasure Island, Cal.) .....Lt. (jg), U.S.N.R
Keleher, M. F., Iowa City (Great Lakes, Ill.)..Lt. (jg), U.S.N.R.
Keohen, G. F., Iowa City (Camp Grant, Ill.)....Capt., A.U.S.
Kugler, F. E., Iowa City (Fort Warren, Wyo.)....Capt., A.U.S.
Lowry, F. C., Iowa City (Sioux Falls, S. D.)....1st Lt., A.U.S.
McCann, J. P., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
McQuiston, W. O., Iowa City (Chicago, Ill.)....1st Lt., A.U.S.
Moen, B. H., Iowa City
Moon, R. E., Iowa City (Camp Bowie, Texas)....1st Lt., A.U.S.
Phillips, R. M., Iowa City (San Francisco, Cal.) 1st Lt., A.U.S.
Pulliam, R. L., Iowa City
Randall, C. G., Iowa City
Randall, R. G., Iowa City (Waterloo, Iowa).....Capt. A.U.S.
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.) .....1st Lt., A.U.S.
Russin, L. A., Iowa City (Fort Blanding, Fla.)....Capt., A.U.S.
Saar, J. L., Iowa City (APO New York, N. Y.)..Capt., A.U.S.
Sawtelle, W. W., Iowa City
Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Shand, J. A., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Shapiro, S. I., Iowa City
Simpson, F. E., Iowa City (Camp Grant, Ill.).....A.U.S.
Skewis, J. E., Iowa City (Rochester, N. Y.)..Lt. (jg), U.S.N.R.
Skouge, O. T., Iowa City
Towle, R. A., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Warren, R. F., Iowa City (Santa Barbara, Cal.).....A.U.S.
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.) .....1st. Lt., A.U.S.
Wicks, W. J., Iowa City (Camp Crowder, Mo.)....Capt., A.U.S.
Williams, L. A., Iowa City (Treasure Island, Cal.).1st Lt., A.U.S.
Willumsen, H. C., Iowa City (Chico, Cal.).....Capt., A.U.S.
Wolkin, J., Iowa City (San Antonio, Texas)....Capt., A.U.S.
Yetter, W. L., Iowa City (APO New York, N. Y.) Capt., A.U.S.
Zahrt, N. E., Iowa City (Miami Beach, Fla.)....1st Lt., A.U.S.
Zimmerman, H. A., Iowa City (Santa Ana, Cal.)..1st Lt., A.U.S.

Keokuk County

Bjork, Floyd, Keota (Camp Barkeley, Texas).....A.U.S.
Doyle, J. L., Sigourney (Camp Barkeley, Texas).....A.U.S.
Engelmann, A. T., What Cheer (Camp Polk, La.) Capt., A.U.S.
Graham, J. A., Gibson (Needles, Cal.).....1st. Lt., A.U.S.
Montgomery, G. E., Keota (Fort Sam Houston, Texas)....A.U.S.
Wiley, Dudley, Hedrick (Mason City, Wash.)

Kossuth County

Clapsaddle, D. W., Burt (Durham, N. C.).....1st Lt., A.U.S.
Williams, R. L., Lakota (San Diego, Cal.)..Lt. Comdr., U.S.N.R.

Lee County

Ashline, G. H., Keokuk (Camp Young, Cal.)
Cleary, H. G., Fort Madison (Parsons, Kan.)
Cooper, R. E., Keokuk (Fort Leonard Wood, Mo.)
Johnstone, A. A., Keokuk (Camp Robinson, Ark.)
McKee, T. L., Keokuk (APO San Francisco, Cal.)..Major, A.U.S.
Pumphrey, L. C., Keokuk (Fort Leavenworth, Kan.)
Rankin, J. R., Keokuk (APO San Francisco, Cal.)
Steffey, F. L., Keokuk (Fort Snelling, Minn.)
Van Werden, B. D., Keokuk (Fort Jackson, S. C.)..Capt., A.U.S.

Linn County

Andre, G. R., Lisbon (Camp Barkeley, Texas)....Major, A.U.S.
Berney, P. W., Cedar Rapids (San Francisco, Cal.) Capt., A.U.S.
Challed, D. S., Cedar Rapids (Fort Ord, Cal.)....1st Lt., A.U.S.
Chapman, R. M., Cedar Rapids (Chicago, Ill.)..1st Lt., A.U.S.
Coughlan, V. H., Cedar Rapids (Fort Snelling, Minn.)
Courter, W. O., Cedar Rapids (Fort Warren, Wyo.).Capt., A.U.S.
Crew, P. I., Marion (Monroe, La.).....Capt., A.U.S.
Dunn, F. C., Cedar Rapids (Pocatello, Idaho)....Capt., A.U.S.
Halpin, L. J., Cedar Rapids (Atlanta, Ga.)....Major, A.U.S.
Hecker J. T., Cedar Rapids (Pecos, Texas).....1st Lt., A.U.S.
Jirsa, H. O., Cedar Rapids (APO New York, N. Y.) Capt., A.U.S.
Keith, J. J., Marion (APO San Francisco, Cal.)..Capt., A.U.S.
Kieck, E. G., Cedar Rapids (San Diego, Cal.) Lt. Comdr., U.S.N.R.
Kruckenberg, W. G., Mount Vernon (San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Locher, R. C., Cedar Rapids (Brownsville, Texas)..Capt., A.U.S.
MacDougal, R. F., Cedar Rapids (Salina, Kan.)....Capt., A.U.S.
McConkie, E. B., Cedar Rapids (Sioux Falls, S. Dak.).....Major, A.U.S.
McQuiston, J. S., Cedar Rapids (Salina, Kan.)..Major, A.U.S.
Netolicky, R. Y., Cedar Rapids (San Francisco, Cal.)..Lt., U.S.N.R.
Noe, C. A., Cedar Rapids (Hot Springs, Ark.)..Major, A.U.S.
Parke, John, Cedar Rapids (APO New York, N. Y.) Capt., A.U.S.
Proctor, R. D., Cedar Rapids (Corpus Christi, Texas) .....Lt. Comdr., U.S.N.R.
Redmond, J. J., Cedar Rapids (APO New York, N. Y.) .....Capt., A.U.S.
Rieniets, J. H., Cedar Rapids (Great Lakes, Ill.) .....Lt. Comdr., U.S.N.R.
Sedlacek, L. B., Cedar Rapids (Camp Screven, Ga.) Major, A.U.S.
Smrha, J. A., Cedar Rapids (Camp Davis, N. C.)..1st Lt., A.U.S.
Stark, C. H., Cedar Rapids (Pueblo, Colo.).....Capt., A.U.S.
Sulek, A. E., Cedar Rapids (APO San Francisco, Cal.) .....Major, A.U.S.
Woodhouse, K. W., Cedar Rapids (APO New York, N. Y.) .....Major, A.U.S.
Wray, R. M., Cedar Rapids (APO San Francisco, Cal.) .....Capt., A.U.S.
Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.

Louisa County

DeYarman, K. T., Morning Sun (San Antonio, Texas) .....1st Lt., A.U.S.

Lucas County

Lister, K. E., Chariton (Fort Snelling, Minn.)

Lyon County

Cook, S. H., Rock Rapids (Memphis, Tenn.).....Capt., A.U.S.
Corcoran, T. E., Rock Rapids (APO New York, N. Y.) .....Capt. A.U.S.
De Young, G. M., George (Camp Barkeley, Texas)..Capt., A.U.S.
Moriarty, J. F., Rock Rapids (Fort Leonard Wood, Mo.) .....1st Lt., A.U.S.

Madison County

Boden, H. N., Truro (Fresno, Cal.)
Chesnut, P. F., Winterset (Portland, Ore.).....1st Lt., A.U.S.
Wicks, R. F., Winterset (Portland, Ore.)
Veltman, J. F., Winterset (St. Louis, Mo.).....Capt., A.U.S.

Mahaska County

Bennett, G. W., Oskaloosa (Fort Riley, Kan.)..Major, A.U.S.
Clark, G. H., Oskaloosa.....Lt. Comdr., U.S.N.R.
Greenlee, M. R., Oskaloosa (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Lemon, K.M., Oskaloosa.....1st Lt., A.U.S.

Marion County

Elliott, V. J., Knoxville (San Diego, Cal.).....Capt., A.U.S.
Mater, D. W., Knoxville (Lincoln, Neb.).....Capt., A.U.S
Ralston, F. P., Knoxville (Indio, Cal.).....Capt., A.U.S.
Schiek, C. M., Knoxville.....Lt. Comdr., U.S.N.R.
Schroeder, M. C., Pella (Camp Uhlan, Texas)....1st Lt., A.U.S.
Williams, D. B., Knoxville.....Capt. A.U.S.

Marshall County

Carpenter, R. C., Marshalltown (APO New York, N. Y.) .....Capt., A.U.S.
Marble, E. J., Marshalltown (San Diego, Cal.)....Lt., U.S.N.R.
Marble, W. P., Marshalltown (Walla Walla, Wash.) Capt., A.U.S.
Meyer, M. G., Marshalltown (Camp Polk, La.)....Capt., A.U.S.
Noonan, J. J., Marshalltown (San Diego, Cal.)..Major, A.U.S.
Phelps, R. E., State Center (Camp Baker, Cal.)..1st Lt., A.U.S.
Sinning, J. J., Melbourne (Camp Robinson, Ark.)..Capt., A.U.S.
Smith, E. M., State Center (Sioux City, Ia.).....Major, A.U.S.
Stegman, J. J., Marshalltown (Portland, Ore.)..Capt., A.U.S.
Wells, R. C., Marshalltown (Gowen Field, Idaho) 1st Lt., A.U.S.
Wolfe, O. D., Marshalltown (Fort Riley, Kan.)..Capt., A.U.S.
Wolfe, R. M., Marshalltown (Pensacola, Fla.).Lt. (jg), U.S.N.R.

Mills County

DeYoung, W. A., Glenwood (Camp Crowder, Mo.)..Capt., A.U.S.
Magaret, E. C., Glenwood (Lubbock, Texas)....1st Lt., A.U.S.
Shonka, T. E., Malvern (Baltimore, Md.).....1st Lt., A.U.S.

Mitchell County

Culbertson, R. A., St. Ansgar (Modesto, Cal.).....Major, A.U.S.
Moore, E. E. (Camp Pickett, Virginia).....Major, A.U.S.
Owen, William (San Diego, Cal.).....Lt. (jg), U.S.N.R.
Walker, T. G., Riceville (Minneapolis, Minn.).....Lt., U.S.N.R.

Monona County

Almer, L. E., Moorehead (Fort Knox, Ky.)
Gaukel, L. A., Onawa (APO Seattle, Wash.)....1st Lt., A.U.S.
Harlan, M. E., Onawa (care PM, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Stauch, M. O., Whiting (Fort Rosecrans, Cal.).....A.U.S.
Wainwright, M. T., Mapleton (Camp Barkeley, Texas)...A.U.S.
Wolpert, P. L., Onawa (Denver, Colo.).....Capt., A.U.S.

Monroe County

Richter, H. A., Albia (Waco, Texas).....Capt., A.U.S.
Smith, R. A., Albia (San Antonio, Texas).....1st Lt., A.U.S.

Montgomery County

Bastron, H. C., Red Oak (APO New York, N. Y.)..Major, A.U.S.
Hansen, F. A., Red Oak (San Diego, Cal.).....Lt., U.S.N.R.
Moriarty, L. R., Villisca (APO Seattle, Wash.)....Capt., A.U.S.
Sorensen, E. M., Red Oak (Jefferson Barracks, Mo.) .....1st. Lt., A.U.S.

Muscatine County

Ady, A. E., West Liberty (care PM, San Francisco, Cal.)U.S.N.R.
Asthalter, R. W., Muscatine (Fort Meade, Md.)..1st Lt., A.U.S.
Carlson, E. H., Muscatine (Kalamazoo, Mich.)....Capt., A.U.S.
Goad, R. R., Muscatine (Washington, D. C.) Lt. Comdr., U.S.N.R.
Kimball, J. E., Jr., West Liberty (APO Miami, Fla.)
Lindley, E. L., Muscatine (APO Los Angeles, Cal.).Capt., A.U.S.
Muhs, E. O., Muscatine (Camp Claiborne, La.).....Capt., A.U.S.
Norem, Walter, Muscatine (APO Miami, Fla.)....Capt., A.U.S.
Robertson, T. A., West Liberty (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Sywassink, G. A., Muscatine (Camp Campbell, Ky.)Major, A.U.S.
Whitmer, L. H., Wilton Junction (Fort Sill, Okla.).Major, A.U.S.

O'Brien County

Getty, E. B., Primghar (Camp Robinson, Ark.)..1st Lt., A.U.S.
Hayne, W. W., Paullina (APO New York, N. Y.)..1st Lt., A.U.S.
Moen, S. T., Hartley (APO New York, N. Y.)....Major, A.U.S.
Myers, K. W., Sheldon (Watertown, S. Dak.)..1st Lt., A.U.S.

Osceola County

Kuntz, G. S., Sibley (APO New York, N. Y.)

Page County

Barnes, C. A., Shenandoah (Fort Bragg, N. C.)....Capt., A.U.S.
Blackman, Nathan, Shenandoah.....Capt., A.U.S.
Bossingham, E. N., Clarinda (Camp Roberts, Cal.)..Capt., A.U.S.
Bunch, H. Mck., Shenandoah (Farragut, Idaho) .....Lt. Comdr., U.S.N.R.
Burdick, F. D., Shenandoah (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Burnett, F. K., Clarinda (Camp Carson, Colo.)....Major, A.U.S.
Little, E. B., Shenandoah.....1st Lt., A.U.S.
Rausch, G. R., Clarinda (Wendover Field, Utah) 1st Lt., A.U.S.
Savage, L. W., Shenandoah (Fort Meade, Md.)..1st Lt., A.U.S.

Palo Alto County

Davey, W. P., Emmetsburg (San Diego, Cal.) Lt. (jg), U.S.N.R.

Plymouth County

Foss, R. H., Remsen (Salt Lake City, Utah)..1st Lt., A.U.S.
Wolfson, Harold (Fort Lewis, Wash.).....Capt., A.U.S.

Pocahontas County

Blair, F. L., Jr., Fonda.....1st Lt., A.U.S.
Herrick, T. G., Gilmore City (Camp Hale, Colo.)..Capt., A.U.S.
Larson, J. B., Laurens (Camp Chaffee, Ark.).....1st Lt., A.U.S.
Leserman, L. K., Rolfe (Camp Barkeley, Texas).1st Lt., A.U.S.

Polk County

Abbott, W. D., Des Moines (Oakland, Cal.)..Lt. Comdr., U.S.N.R.
Anderson, N. B., Des Moines (APO New York, N. Y.) .....Lt. Col., A.U.S.
Angell, C. A., Des Moines (Carlisle Barracks, Pa.).Capt.,A.U.S.
Anspach, R. S., Mitchellville (MacDill Field, Fla.) Major, A.U.S.
Barner, J. L., Des Moines (Atlanta, Ga.)....Major, A.U.S.
Barnes, B. C., Des Moines (Ogden, Utah).....Capt., A.U.S.
Bates, M. T., Des Moines (Fleet PO, New York, N. Y.) .....Lt. Comdr., U.S.N.R.
Bender, H. R., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Bond, T. A., Des Moines (Quantico, Va.).....Lt. (jg), U.S.N.R.
Bone, H. C., Des Moines (Arlington, Cal.).....Capt., A.U.S.
Brown, A. W., Des Moines (Fort Leavenworth, Kan.) .....Capt., A.U.S.
Bruner, J. M., Des Moines (Fort Bliss, Texas)....Major, A.U.S.
Bruns, P. D., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Burgeson, F. M., Des Moines (APO New York, N. Y.) .....Capt., A.U.S.
Caldwell, J. W., Des Moines (Edmonton, Alberta, Canada) .....Flight Lt., R.C.A.F.
Chambers, J. W., Des Moines (Fort Riley, Kan.)..1st Lt., A.U.S.
Chase, W. B., Jr., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Clark, G. E., Jr., Des Moines (Randolph Field, Texas) .....1st Lt., A.U.S.
Connell, J. R., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Corn, H. H., Des Moines (St. Louis, Mo.).....1st Lt., A.U.S.
Coughlan, D. W., Des Moines (Camp Gruber, Okla.) Capt., A.U.S.
Crowley, D. F., Jr., Des Moines (APO New York, N. Y.) .....Capt., A.U.S.
Crowley, F. A., Des Moines (APO New York, N. Y.) .....1st Lt., A.U.S.
DeCicco, Ralph, Des Moines (APO Los Angeles, Cal.) .....Capt., A.U.S.
Decker, H. G., Des Moines (Long Beach, Cal.)....Lt., U.S.N.R.
Downing, A. H., Des Moines (Fort Snelling, Minn.) .....1st Lt., A.U.S.
Dushkin, M. A., Des Moines (Fort Huachuca, Ariz.) .....Capt., A.U.S.
Elliott, O. A., Des Moines (Pecos, Texas).....1st Lt., A.U.S.
Ellis, H. G., Des Moines (Casper, Wyo.).....1st Lt., A.U.S.
Ervin, L. J., Des Moines (Fort Clark, Texas)....Major, A.U.S.
Fried, David, Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Fracasse, John, Des Moines.....1st Lt., A.U.S.
George, E. M., Des Moines (Camp Dodge, Iowa) .....Lt. Comdr., U.S.N.R.
Gerchek, E. W., Des Moines
Goldberg, Louie, Des Moines (Palm Springs, Cal.)..1st Lt., A.U.S.
Gordon, A. M., Des Moines (Fort Ord, Cal.)....Capt., A.U.S.
Graeber, F. O., Des Moines (Aberdeen, S. Dak.)..1st Lt., A.U.S.
Greek, L. M., Des Moines (Camp Crowder, Mo.)..1st Lt., A.U.S.
Gurau, H. H., Des Moines (Portland, Ore.)....1st Lt., A.U.S.
Haines, D. J., Des Moines (Denver, Colo.)....1st Lt., A.U.S.
Harris, D. D., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Harris, H. L., Des Moines.....1st Lt., A.U.S.
Hess, John, Jr., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
James, A. D., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.
Johnston, C. H., Des Moines (APO New York, N. Y.) .....Lt. Col., A.U.S.
Kast, D. H., Des Moines (Fort Stevens, Ore.).....Capt., A.U.S.
Kelley, E. J., Des Moines (Piedmont, Cal.).Lt. Comdr., U.S.N.R.
Kelly, D. H., Des Moines (Denver, Colo.).....Major, A.U.S.
Klocksiem, H. L., Des Moines.....Lt. (jg), U.S.N.R.
Kottke, E. E., Des Moines (Temple, Texas)....1st Lt., A.U.S.
Landis, S. N., Des Moines (West Palm Beach, Fla.) .....1st Lt., A.U.S.
La Tona, Salvatore, Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Lederman, James, Des Moines.....1st Lt., R.C.A.
Lehman, E. W., Des Moines (Memphis, Tenn.)....Major, A.U.S.
Lovejoy, E. P., Des Moines (Mare Island, Cal.) .....Lt. Comdr., U.S.N.R.
Maloney, P. J., Des Moines (Fort Lewis, Wash.)...1st Lt., A.U.S.
Marquis, G. S., Des Moines (Chicago, Ill.)..Lt. Comdr., U.S.N.R.
Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.
Mauritz, E. L., Des Moines (Camp Gruber, Okla.) 1st Lt., A.U.S.
McCoy, H. J., Des Moines (Iowa City, Iowa)...Comdr., U.S.N.R.
McDonald, D. J., Des Moines (March Field, Cal.).Capt., A.U.S.
McNamee, J. H., Des Moines (Seattle, Wash.) .....Lt. Comdr., U.S.N.R.
Mencher, E. W., Des Moines.....1st Lt., A.U.S.
Merkel, B. M., Des Moines (Tullahoma, Tenn.)..Major, A.U.S.
Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.) .....Capt., A.U.S.
Morden, R. P., Des Moines (Edgewood Arsenal, Md.) .....1st Lt., A.U.S.
Murphy, J. H., Des Moines (San Diego, Cal.).....Lt., U.S.N.R.
Nelson, A. L., Des Moines (Camp Livingston, La.) Capt., A.U.S.
Noun, L. J., Des Moines (Great Lakes, Ill.)..Lt. (jg), U.S.N.R.
Noun, M. H., Des Moines (APO New York, N. Y.)..Major, A.U.S.
Nourse, M. H., Des Moines (Bethesda, Md.)..Lt. (jg), U.S.N.R.
Patton, B. W., Des Moines (Camp Robinson, Ark.).....1st Lt., A.U.S.
Pearlman, L. R., Des Moines (APO Seattle, Wash.) .....1st Lt., A.U.S.
Peisen, C. J., Des Moines (Camp Perry, Ohio)..1st Lt., A.U.S.
Penn, E. C., West Des Moines (Spokane, Wash.) .....1st Lt., A.U.S.
Pfeiffer, E. P., Des Moines (Springfield, Mo.)....Capt., A.U.S.
Phillips, A. B., Des Moines (Corpus Christi, Texas) .....Lt., U.S.N.R.
Porter, R. J., Des Moines (Santa Ana, Cal.)..1st Lt., A.U.S.
Powell, L. D., Des Moines (Long Beach, Cal.)...Comdr., U.S.N.R.
Pratt, E. B., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Priestley, J. B., Des Moines (Camp Phillips, Kan.)..Major, A.U.S.
Purdy, W. O., Des Moines (Camp Howze, Texas)..Capt., A.U.S.
Riegelman, R. H., Des Moines (APO New York, N. Y.) .....Major, A.U.S.
Robinson, V. C., Des Moines (Tampa, Fla.)....Capt., A.U.S.
Rotkow, M. J., Des Moines (Louisville, Ky.)....1st Lt., A.U.S.
Schaeferle, M. J., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Schlaser, V. L., Des Moines (Chicago, Ill.)..Lt. (jg), U.S.N.R.
Shepherd, L. K., Des Moines (APO New York, N. Y.) .....1st Lt., A.U.S.
Shifler, H. K., Des Moines (APO New York, N. Y.).Capt., A.U.S.
Singer, P. L., Des Moines (Camp Grant, Ill.)..1st Lt., A.U.S.
Skultety, J. A., Des Moines (Brownsville, Texas) .....1st. Lt., U.S.P.H.S.
Smead, H. H., Des Moines (Bangor, Me.).....1st Lt., A.U.S.
Smith, H. J., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Smith, R. T., Des Moines (Meridian, Miss.)....1st Lt., A.U.S.
Snodgrass, R. W., Des Moines (Fort Rosecrans, Cal.) .....Capt., A.U.S.
Snyder, G. E., Grimes (Camp Robinson, Ark.)....1st Lt., A.U.S.
Sohm, H. A., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.
Sorensen, R. M., Des Moines (Topeka, Kan.).Major, U.S.P.H.S.
Springer, F. A., Des Moines (Treasure Island, Cal.) .....Lt. Comdr., U.S.N.R.
Stearns, A. B., Des Moines (Denver, Colo.)..Major, A.U.S.
Stickler, Robert, Des Moines (Fort Benning, Ga.) 1st. Lt., A.U.S.
Stitt, P. L., Des Moines (Seattle, Wash.)....Lt. (jg), U.S.N.R.
Throckmorton, J. F., Des Moines (Camp Howze, Texas) .....Capt. A.U.S.
Toubes, A. A., Des Moines (Greenville, Miss.)..1st Lt., A.U.S.
Turner, H. V., Des Moines (Hot Springs, Ark.)..1st Lt., A.U.S.
Updegraff, Thomas, Des Moines (Spokane, Wash.).1st Lt., A.U.S.
Van Hale, L. A., Des Moines (Butler, Penn.)....1st Lt., A.U.S.
Vaubel, E. K., Des Moines (Portland, Ore.).....Capt., A.U.S.
Wagner, E. C., Des Moines (Washington, D. C.)..1st Lt., A.U.S.
Willett, W. M., Des Moines (Fort Bragg, N. C.)..1st Lt., A.U.S.
Wirtz, D. C., Des Moines (Great Lakes, Ill.)..Lt. Comdr., U.S.N.R.
Zarchy, A. C., Des Moines (Camp Cook, Cal.).....Capt., A.U.S.

Pottawattamie County

Beaumont, F. H., Council Bluffs (APO New York, N. Y.) .....Major, A.U.S.
Cogley, J. P., Council Bluffs (APO Los Angeles, Cal.) .....Capt., A.U.S.
Collins, R. M., Council Bluffs (San Diego, Cal.)....Lt., U.S.N.R.
Dean, A. M., Council Bluffs (Pensacola, Fla.) .....Lt. Comdr., U.S.N.R.
Hennessy, J. D., Council Bluffs (Chicago, Ill.).1st Lt., A.U.S.
Jensen, A. L., Council Bluffs (APO San Francisco, Cal.) .....Lt. Col., A.U.S.
Klok, G. J., Council Bluffs (Athol, Idaho)....Lt. (jg), U.S.N.R.
Kurth, C. J., Council Bluffs (Camp Crowder, Mo.).1st Lt., A.U.S.
Limbert, E. M., Council Bluffs (Camp Carson, Colo.) .....Capt. A.U.S.
Maiden, S. D., Council Bluffs (San Francisco Cal.) .....Major, A.U.S.
Martin, L. R., Council Bluffs (APO Los Angeles, Cal. .....Capt., A.U.S.
Moskovitz, J. M., Council Bluffs (Camp Lockett Cal.) .....Capt., A.U.S.
Sternhill, Isaac, Council Bluffs (Fort Warren, Wyo.) .....Capt., A.U.S.

Tinley, R. E., Council Bluffs (APO New York, N. Y.) ..... Capt., A.U.S.
Treynor, J. V., Council Bluffs (South Bend, Ind.) ..... Lt. Comdr., U.S.N.R.
Wieseler, R. J., Avoca (McChord Field, Wash.) ..... A.U.S.
Wurl, O. A., Council Bluffs (APO New York, N. Y.) ..... Capt., A.U.S.

Poweshiek County

Brobyn, T. E., Grinnell (Camp San Luis Obispo, Cal.) ..... Capt., A.U.S.
Hickerson, L. C., Brooklyn (Oxnard, Cal.) ..... 1st. Lt., A.U.S.
Korfmacher, E. S., Grinnell (San Francisco, Cal.) ..... Capt., A.U.S.
Niemann, T. V., Brooklyn (Camp Shelby, Miss.) ..... 1st Lt., A.U.S.
Parish, J. R., Grinnell (Treasure Island, Cal.) ..... Lt. Comdr., U.S.N.R.

Ringgold County

Seaman, C. L., Mount Ayr (Van Buren, Ark.) .. Capt., A.U.S.

Sac County

Bassett, G. H., Sac City (San Diego, Cal.) .. Lt. Comdr., U.S.N.R.
Deters, D. C., Schaller (APO New York, N. Y.) .. Capt., A.U.S.
Evans, W. I., Sac City (Camp Hood, Texas) .. 1st Lt., A.U.S.
Klocksiem, R. G., Odebolt (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Neu, H. N., Sac City (Jefferson Barracks, Mo.) ... Capt., A.U.S.

Scott County

Baker, R. W., Davenport (Rock Island, Ill.) .. 1st Lt., A.U.S.
Balzer, W. J., Davenport (APO Seattle, Wash.) .. 1st Lt., A.U.S.
Block, L. A., Davenport (APO New York, N. Y.) .. Major, A.U.S.
Bishop, J. F., Davenport (APO Seattle, Wash.) .. 1st Lt., A.U.S.
Boden, W. C., Davenport (Biloxi, Miss.) ..... Capt., A.U.S.
Brown, D. H., Davenport ..... Capt., A.U.S.
Brown, M. J., Davenport (Pando, Colo.) ..... Capt., A.U.S.
Carey, E. T., Davenport (Fort Devens, Mass.) .. 1st Lt., A.U.S.
Christiansen, C. C., Dixon (APO San Francisco, Cal.) ..... 1st Lt., A.U.S.
Cummins, G. M., Jr., Davenport ..... 1st Lt., A.U.S.
Decker, C. E., Davenport (Oklahoma City, Okla.) ..... 1st Lt., A.U.S.
Evans, H. J., Davenport (Colorado Springs, Colo.) . Capt., A.U.S.
Gibson, P. E., Davenport (Palm Springs, Cal.) ..... Capt., A.U.S.
Hurevitz, H. M., Davenport (Fort Lewis, Wash.) .. Capt., A.U.S.
Hurteau, Everett, Davenport (APO New York, N. Y.) ..... 1st Lt., A.U.S.
Hurteau, W. W., Davenport (Camp Barkeley, Texas) ..... Major, A.U.S.
Kimberly, L. W., Davenport (New Orleans, La.) . Capt., A.U.S.
LaDage, L. H., Davenport (Camp Campbell, Ky.) .. Capt., A.U.S.
Lorfeld, G. W., Davenport (Fort Myers, Fla.) .... Capt., A.U.S.
Marker, J. I., Davenport (Camp Carson, Colo.) .. Col., A.U.S.
McMeans, T. W., Davenport (APO New York, N. Y.) ..... 1st Lt., A.U.S.
Neufeld, R. J., Davenport (Rock Island, Ill.) .. 1st Lt., A.U.S.
Shafer, A. W., Davenport (Camp Shelby, Miss.) .. 1st Lt., A.U.S.
Sheeler, I. H., Davenport (Omaha, Neb.) ..... 1st Lt., A.U.S.
Smazal, S. F., Davenport (Pando, Colo.) ..... 1st Lt., A.U.S.
Sorenson, A. C., Davenport (Oakland, Cal.) .. Lt. Comdr., U.S.N.R.
Sunderbruch, J. H., Davenport (Paris, Texas) .... 1st Lt., A.U.S.
Weinberg, H. B., Davenport (Fort Benning, Ga.) .. Major, A.U.S.
Zukerman, C. M., Bettendorf (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.

Shelby County

Bisgard, C. V., Harlan (Farragut Air Base, Idaho) ..... Lt. Comdr., U.S.N.R.
Griffith, W. O., Shelby ..... A.U.S.

Sioux County

Gleysteen, R. R., Alton (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Grossmann, E. B., Orange City (Fort Sam Houston, Texas) ..... 1st Lt., A.U.S.
Larsen, M. O., Hawarden (Camp Robinson, Ark.) .. Major, A.U.S.

Story County

Conner, J. D., Nevada (Camp Robinson, Ark.) .... 1st Lt., A.U.S.
Fellows, J. G., Ames (Carlisle Barracks, Penn.) . Capt., A.U.S.
Lekwa, A. H., Story City (San Diego, Cal.) .. Lt. Comdr., U.S.N.R.
McFarland, G. E., Jr., Ames (San Pedro, Cal.) .... Lt., U.S.N.R.
McFarland, J. E., Ames (Farragut, Idaho) .. Lt. Comdr., U.S.N.R.
Rosebrook, L. E., Ames (Randolph Field, Texas) . 1st Lt., A.U.S.
Sperow, W. B., Nevada (San Diego, Cal.) .. Lt. Comdr., U.S.N.R.
Thorburn, O. L., Ames (Las Vegas, Nevada) .. Major, A.U.S.

Tama County

Boller, G. C., Traer (Camp Robinson, Ark.)
Dobias, S. G., Chelsea (APO Seattle, Washington)
Havlik, A. J., Tama (Fleet PO, San Francisco, Cal.) . Lt., U.S.N.R.
Schaeferle, L. G., Gladbrook (Fort Leonard Wood, Mo.)
Standefer, J. M., Tama (San Diego, Cal.)

Taylor County

Hardin, J. F., Bedford (Fort Leonard Wood, Mo.)

Union County

Paragas, M. R., Creston (Avon Park, Fla.) ..... Capt., A.U.S.
Ryan, C. J., Creston (Scribner, Neb.) ..... 1st Lt., A.U.S.

Wapello County

Brentan, Emanuel, Ottumwa (Moline, Ill.)
Brody, Sidney, Ottumwa
Gilfillan, C. D. N., Eldon (Battle Creek, Mich.)
Hughes, R. O., Ottumwa (San Diego, Cal.)
Nelson, F. L., Jr., Ottumwa
Prewitt, L. H., Ottumwa
Selman, R. J., Ottumwa (El Paso, Texas)
Struble, G. C., Ottumwa (Fort Harrison, Ind.)
Whitehouse, W. N., Ottumwa
Worley, C. L., Ottumwa (Camp Shelby, Miss.) .... Capt., A.U.S.

Warren County

Fullgrabe E. A., Indianola (Bethesda, Md.) Lt. (jg), U.S.N.R.
Shaw, E. E., Indianola (APO New Orleans, La.) .... Capt., A.U.S.
Trueblood, C. A., Indianola (Camp Campbell, Ky.) 1st Lt., A.U.S.

Washington County

Boice, C. L., Washington (Pensacola, Wash.) Lt. (jg), U.S.N.R.
Droz, A. K., Washington (Grosse Ile, Mich.) . Lt. Comdr., U.S.N.R.
Mast, T. M., Washington (Sioux Falls, S. D.) Lt. (jg), U.S.N.R.
Stutsman, R. E., Washington (Pensacola, Fla.) .... Lt., U.S.N.R.
Ware, S. C., Kalona (Fort Meade, Md.) ..... 1st Lt., A.U.S.

Wayne County

Hyatt, C. N., Jr., Humeston (Indio, Cal.) ..... Capt., A.U.S.

Webster County

Baker, C. J., Fort Dodge (APO New York, N. Y.) ... Capt., A.U.S.
Burch, E. S., Dayton (Camp Livingston, La.) ..... Capt., A.U.S.
Burleson, M. W., Fort Dodge (Vancouver, Wash., .. 1st Lt., A.U.S.
Coughlan, C. H., Fort Dodge (Jefferson Barracks, Mo.) ..... Major, A.U.S.
Joyner, N. M., Fort Dodge (Brooklyn Field, Ala.)
Kluever, H. C., Fort Dodge (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Larsen, H. T., Fort Dodge (Baltimore, Md.) ... Lt. (jg), U.S.N.R.
Shrader, J. C., Fort Dodge (Camp Young, Cal.) .... Major, A.U.S.
Thatcher, O. D., Fort Dodge (Kelly Field, Texas) .. 1st. Lt., A.U.S.
Thatcher, W. C., Fort Dodge (Fort Meade, Md.) .... Capt., A.U.S.
Van Patten, E. M., Ft. Dodge (Alamogordo, N. M.) . 1st Lt., A.U.S.

Winneshiek County

Fritchen, A. F., Decorah (APO San Francisco, Cal.) ..... Comdr., U.S.N.R.
Hospodarsky, L. J., Ridgeway (Seattle, Wash.) .. Capt., A.U.S.
Larson, L. E., Decorah (Farragut, Idaho) ..... U.S.N.R.
Svendsen, R. N., Decorah (San Diego, Calif.) .. Lt. (jg) U.S.N.R.
Van Besien, G. J., Decorah (Fort Leavenworth, Kan.) ..... A.U.S.

Woodbury County

Bettler, P. L., Sioux City (APO San Francisco, Cal.) ..... Major, A.U.S.
Blackstone, M. A., Sioux City (Pittsburg, Cal.) . 1st Lt., A.U.S.
Boe, Henry, Sioux City (Salina, Kan.) ..... Capt., A.U.S.
Burroughs, H. H., Sioux City ..... Lt. (jg), U.S.N.R.
*Cmeyla, P. M., Sioux City (APO San Francisco, Cal.) ..... Capt., A.U.S.
Crowder, R. E., Sioux City (San Diego, Cal.) . Lt. Comdr., U.S.N.R.
Dimsdale, L. J., Sioux City (Camp Claiborne, La.) . 1st Lt., A.U.S.
Down, H. I., Sioux City (Camp Breckenridge, Ky.) Major, A.U.S.
Elson, V. J., Danbury (APO Seattle, Wash.)
Frank, L. J., Sioux City (Mare Island, Cal.) . Lt. Comdr., U.S.N.R.
Graham, J. W., Sioux City (San Diego, Cal.) . Lt. Comdr., U.S.N.R.
Grossman, Milton, Sioux City (Hobbs, N. M.) .. Capt., A.U.S.
Heffernan, C. E., Sioux City (Salt Lake City, Utah) ..... 1st Lt., A.U..S
Hicks, W. K., Sioux City (Fort Riley, Kan.) .. Major, A.U.S.
Honke, E. M., Sioux City (Palm Springs, Cal.) .. Capt., A.U.S.
Kaplan, David, Sioux City (Fort Bragg, N. C.) .. 1st Lt., A.U.S.
Knott, R. C., Sioux City (New York, N. Y.) .... Capt., A.U.S.
Krigsten, W. M., Sioux City (Springfield, Mo.) .. Lt. Col., A.U.S.
Martin, R. F., Sioux City (Camp Atterbury, Ind.) . 1st Lt., A.U.S.
Mattice, L. H., Danbury (Camp Livingston, La.) ..... 1st Lt., A.U.S.
McCuistion, H. M., Sioux City (APO New York, N. Y.) ..... Capt., A.U.S.
Mugan, R. C., Sioux City (Gowen Field, Idaho) .. 1st Lt., A.U.S.
Osincup, P. W., Sioux City (Edgewood Arsenal, Md.) ..... 1st Lt., A.U.S.
Rarick, I. H., Sioux City (Soquel, Cal.) ..... 1st Lt., A.U.S.
Reeder, J. E., Jr., Sioux City (Modesto, Cal.) .... Capt., A.U.S.
Ryan, M. J., Sioux City (Topeka, Kan.) ..... Capt., A.U.S.
Schwartz, J. W., Sioux City (Camp Crowder, Mo.) . Major, A.U.S.
Tracy, J. S., Sioux City (Salt Lake City, Utah) .... Capt., A.U.S.
Wilson, L. L., Sioux City (Camp San Luis Obispo, Cal.) ..... Capt., A.U.S.

Worth County

Westley, G. S., Manly (Camp Forrest, Tenn.) .. Major, A.U.S.

Wright County

Aageson, C. A., Dows
Bird, R. G., Clarion (San Diego, Cal.) ..... Lt. Comdr., U.S.N.R.
Doles, E. A., Clarion (Phoenix, Ariz.)
Leinbach, S. P., Belmond (Farragut Air Base, Idaho)
Missildine, W. H., Eagle Grove (APO San Francisco, Cal.) ..... Capt., A.U.S.

(*) Reported missing in action.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. F. W. MULSOW, Cedar Rapids
President-Elect—MRS. W. S. REILEY, Red Oak
Secretary—MRS. A. G. FELTER, Van Meter
Treasurer—MRS. A. E. MERKEL, Des Moines

THE FOURTEENTH ANNUAL CONVENTION

The Fourteenth Annual Convention of the Woman's Auxiliary to the Iowa State Medical Society will be held in Des Moines, April 29 and 30. Our headquarters will be the Hotel Kirkwood. Please plan to attend all meetings; whether or not you are a member of the Auxiliary, you are most welcome. Remember our slogan: Every doctor's wife an Auxiliary member, and let each member of the Auxiliary be responsible for a new member this year.

The preconvention board meeting will be held Thursday, April 29, at the Kirkwood Hotel, and we are hoping to have present every officer, committee chairman, and county president. We trust that you can be with us at this time to assist the officers in carrying on the work of these turbulent days.

The annual banquet will be held at the Hotel Fort Des Moines at 6:30 p. m. on Thursday evening.

Our speaker Friday morning will be Dr. Ransom D. Bernard of Clarion, chairman of the Committee on Public Policy and Legislation of the Iowa State Medical Society. He will discuss The Present Trend of Medical Legislation, which is a most timely subject. The Iowa Methodist Hospital Glee Club will sing.

At our annual luncheon Friday we shall have the doctors as our guests. Dr. Frank P. Winkler, President of the Iowa State Medical Society, Dr. Lee R. Woodward, President-Elect, and Dr. James C. Hill, our Councilor, will be present. Our speaker, Dr. Carl F. Jordan, will talk on The State Department of Health and the Blood Donor Program. We are anxious to hear his message and cooperate with him in this defense program.

Since so many of our doctors are in service, we trust you will make a special effort to attend and help make this meeting a success. We extend a special invitation to their wives who have remained at home.

Mrs. F. W. Mulsow, President

THE RED CROSS NUTRITION PROGRAM*

There are 45,000,000 undernourished persons in America, the richest country in the world!

This was the startling fact revealed two years ago when the new army was being built—when one-third of the rejections were due largely to poor health, directly or indirectly the result of nutritional deficiencies.

Today, "Ninety per cent of time lost in war industries is due to illness and not to accidents," Dr. Mark Graubard, nutrition expert of the Federal Security Agency, stated.

With the war demanding more work and longer hours to keep the men at the front supplied, the health of the people is a national concern. The nutrition program of the Red Cross is, therefore, an important factor in the daily lives of all of us.

In Iowa alone, 62 Red Cross chapters have authorized instructors in the Nutrition Service who, in the past six months, have taught 165 classes in nutrition and canteen work. More than 2,000 Iowa housewives have learned in the nutrition course to combine ingenuity and knowledge in overcoming food shortages and combating hidden hunger—hunger of the system for the right foods.

The extent of war effort depends on the strength and stamina of those who do the work, whether in actual war production or in industry supplying that field. On the shoulders of the housewife rests the responsibility of feeding her household correctly and efficiently to supply that strength.

In cooperation with state universities, two nutrition refresher courses have been given by the State Nutrition Committee, one at the University of Iowa in Iowa City, and another at Iowa State College in Ames. Through these refresher courses, the Red Cross has secured instructors among women who have been away from the field of nutrition for more than four years.

Now, with food prices tending upward, sugar and coffee rationing in effect, and the rationing of canned goods and meats beginning soon, the housewife must learn meal planning anew, how to use substitutes, and how to make use of leftovers. Through the Red Cross Nutrition Program, she learns that a well-balanced meal does not necessarily mean a high-cost meal, and that an expensive meal may leave the system starved, although the stomach is filled.

Even a box lunch can be packed full of nutritious foods. A peanut butter and jelly sandwich on whole wheat bread, with deviled eggs, lettuce, carrot strips, an apple, cookies, and milk furnish all the average

*From the American Red Cross Public Information Service.

worker needs to keep going at top speed the rest of the day.

Well-planned, balanced meals build the type of bodies needed today—strong, healthy bodies which can contribute that extra energy so essential in the fight for freedom. Contrariwise, poor nutrition makes for greater susceptibility to disease, causes minor ailments which may develop into major ones, and develops irritability and headache, slowing working ability.

"Man hours lost through illness in war factories in one month are sufficient to build two cruisers, 443 medium tanks, or 3,200 light tanks," Dr. Graubard said. A large part of this illness, he added, might be eliminated by intelligent and vigorous nutrition programs in industry.

Americans must learn to eat right so they can wholeheartedly fight the enemy abroad, and not be handicapped by disease at home. Through its nutrition program, the Red Cross aims to combat malnutrition in every American home, regardless of income, as a vital contribution to the program for defense. Good nutrition should be the first contribution of every housewife in winning the war.

NOTES FROM FEDERAL LEGISLATIVE BULLETIN

The Seventy-seventh Congress adjourned December 16, after having been in continuous session since January 3, 1941. During this time numerous bills of medical interest, a few of major importance, were considered by the Congress, a large majority of which failed to receive favorable action. In fact, few measures of medical interest passed other than those associated with the general war effort. This should occasion no surprise, for the recent Congress functioned through turbulent times. First the imminence of war and then its actuality necessarily focused sharply the attention of the lawmakers on programs pointing to our national security. Other matters received only secondary consideration.

A brief summary of the action taken by the Congress on some of the proposals previously reported in earlier issues of the Bulletin follows.

The bill that was introduced to protect diabetic patients from impure insulin became a law. Under this law, insulin will be distributed under regulations promulgated by the Federal Security Agency. The enactment of this legislation became necessary because of the expiration of the insulin patent under which the purity and potency of insulin has heretofore been regulated.

Federal funds, to the extent of $5,000,000, were made available for loans to students pursuing accelerated medical courses and certain other designated technical courses. Likewise additional funds were made available to the United States Public Health Service for the training of nurses to augment the supply depleted by the demands of the military program.

The osteopaths were persistent in their demands for recognition at the hands of Congress and were successful to the extent that the Surgeon General of the Army was authorized to appoint osteopaths as interns in army hospitals and to the extent that authorization was included in a bill providing appropriations for the Navy Department for the use of funds "for the pay of commissioned medical officers who are graduates of reputable schools of osteopathy." No osteopath has been appointed as an intern in an army hospital nor are osteopaths eligible for appointment in the Medical Corps of the Navy. The authorizations given by the Congress are permissive in form only.

The Congress took one more step looking toward the provision of adequate housing for the Army Medical Library when it authorized an additional appropriation for the purchase of a site for the building. Apparently, however, this urgent project will not be carried to completion until more settled times.

Of particular interest to the medical profession is a provision in the amendatory act of the Soldiers' and Sailors' Civil Relief Act under which leases for office space entered into by persons who thereafter go into military service may be cancelled.

The new Revenue Act will greatly increase the tax burden of physicians as it will other federal income taxpayers. It does not effect any changes in the deductions that a physician may claim on account of professional activities. It does impose an obligation on physicians who have in their employ persons receiving wages in excess of $12 a week, a duty of withholding the victory tax. The new act eliminates an injustice in the manner in which outstanding accounts on the books of a taxpayer at the time of his death have been treated for income tax purposes. Hereafter such unpaid accounts will not be considered as part of the income of the decedent for the year of death, as has heretofore been the case, but will be taxable when paid, as a part of the income of the person who receives the money.

Additional funds were made available to the United States Public Health Service for a continuation of a program to provide reserves of blood plasma in hospitals, the reserves being established to meet any wartime contingency caused by enemy action which may necessitate blood transfusions to civilians.

The Seventy-eighth Congress has convened and it is understood that over 700 bills have already been introduced. It is reported that the President will submit to Congress "a sweeping new social security program, similar to that proposed by Sir William Beveridge for England" and containing many of the features of the social security program now in effect in New Zealand. This program, it is said, will top the legislative agenda of the administration in the Seventy-eighth Congress.

Mrs. J. A. Downing, Chairman, Legislative Committee

JANUARY MEETING OF THE WOMAN'S AUXILIARY TO THE DALLAS-GUTHRIE MEDICAL SOCIETY

The Woman's Auxiliary to the Dallas-Guthrie Medical Society met with the doctors for their regular meeting, Thursday, January 21, in Adel. After a joint luncheon with the Adel Rotarians and the Dallas-Guthrie doctors, the Auxiliary members held their business meeting at the Library.

Mrs. C. A. Nicoll conducted the business meeting. Resignations from Mrs. H. E. Haymond of Perry, President-Elect, and Mrs. E. T. Butterfield of Dallas Center, Secretary, were regretfully accepted. Mrs. W. V. Thornburg of Guthrie Center, and Mrs. A. J. Ross of Perry, were elected to fill these vacancies.

The Auxiliary endorsed the bills for aid to dependent children and smallpox immunization, and contributed to the nurses loan fund.

Following the business meeting, Mrs. P. W. Beckman of Perry gave a paper on New Trends in Medicine.

At the close of the business session, Mrs. Nicoll, the retiring President, introduced Mrs. A. G. Felter of Van Meter, the incoming President, who in turn presented her new officers and announced her committee chairmen.

Twelve members and one guest were present.

Mrs. P. W. Beckman, Perry

NURSING PROFESSION WANTS RECRUITS!*

Probably at no time in our history have such inducements been held out to young women as are offered them today to enter training for the profession of nursing.

The National Nursing Council for War Service and its committee on recruitment of student nurses have undertaken to bring into the profession 65,000 new nurses during 1943, an increase of 10,000 over the 1942 quota. And the need continues to grow more urgent.

So badly needed are the nurses, in fact, that 14 of the 30 accredited schools for training them in Iowa are admitting midyear classes this year, some of them for the first time. Even so, concern has been expressed in medical circles because an insufficient number of applications is being received.

Representatives of the recruitment committee for this state recognize that they are in disadvantageous competition with industry, which can start the young high school graduate off with higher wages. Against this appeal, nursing is pointed to as "war work with a future"—or preparation now for a professional career after the war, when the need for experienced registered nurses will be even greater.

But the "war work" factor is present right now. Each newly graduated nurse either becomes available for service with the armed forces, where the demand for them is pressing, or releases for such service one of those now practicing on the home front. The student nurse, too, can derive satisfaction from the fact that she becomes valuable to her hospital, immediately upon entering training and long before she is inscribed on the nurses' register.

For young women contemplating such a career, to whom the financial consideration is of primary importance, there are several loan funds in Iowa. And for a number of the Iowa training schools, federal scholarships are provided to make the training within reach of anyone, if otherwise qualified.

*Editorial from The Des Moines Register on January 21, 1943.

The state chairman for the Nurses Loan Fund has announced the receipt of two more donations: Dallas-Guthrie Auxiliary, $5.00, and the Montgomery County Auxiliary, $5.00.

Has your Auxiliary sent in its donation for the year?

NOTICE TO HYGEIA CHAIRMEN

Orders for the contest cannot be honored if they were postmarked after January 31, 1943. However, we hope that your Auxiliary will continue to work for HYGEIA until the end of the fiscal year, April 30, 1943.

Many Auxiliaries find it an advantage to have HYGEIA in the reading rooms of girls' and boys' club houses, social centers, beauty shops, fraternity and sorority houses, and fire and police stations.

The War Manpower Board is now conducting a special drive to save time lost because of sickness. Many of the personnel managers of companies are anxious to cooperate on any health measure, and sample copies of HYGEIA are at your disposal for distribution to such companies.

Articles now appearing in HYGEIA on vitamins and nutrition are a boon to the housewife who faces the problem of food rationing. The classes of the various Red Cross programs are finding HYGEIA of particular value in their studies.

Mrs. Ivan K. Sayre, Hygeia Chairman

At the Philadelphia convention in 1931 The House of Delegates passed a resolution that the county, state and national organizations recognize as one of their chief activities the promotion of the distribution of HYGEIA. It is probably the most authentic health periodical in this country.

The members feel the need of a method of authentic education of the laity so that the difference between scientific information and quackery may be understood.

Mrs. F. W. Mulsow, President

BOOK NOTES

The following are some provocative quotations from J. G. Needham's excellent volume entitled *About Ourselves*, the theme of which is: "We need to recognize the animal origin of human nature, mental as well as physical, not to magnify it, and

certainly not to laud it, but to understand it; for understanding leads to control.

"Structural and developmental likenesses do not show that man is descended from any of the present-day Primates, but they do show that he is related by ancestry to them all. The 'missing link,' halfway between man and ape, is a myth: the connection is not between, but behind. Man and apes have followed different lines of specialization, the apes becoming more apish and man more human as time has run. That these routes converge backward toward a common point of origin in the past seems very evident.

"Convergence appears clearly in their individual development. Men and apes are most alike in their infancy and grow unlike as they grow to maturity . . .

"Homo went to the ground; got up on his hind legs; quit using his big toes for grasping; found new uses for his hands; took to wearing clothes; lost most of his hair; tried getting educated; getting intoxicated; getting vaccinated; getting matriculated, and doing other things quite foreign to the zoological realm.

"It is brain development and that alone that justifies the placing of man at the top of the zoological classification. In every other physical endowment he is surpassed by other animals.

"Again, the superiority of Homo Sapiens is merely relative. Only this may be claimed as distinctive of the human infant:

"It is helpless beyond all others—more undeveloped at birth.

"It is witless beyond all others—has fewer developed instincts at birth.

"It requires care beyond all others—nurture both by parents and society.

"It is slow of development beyond all others.

"It acquires powers beyond all others—mental powers.

"There is nothing revealed by measurement of cranial capacity to indicate that modern men have better brains than had the best men of the old stone age. The difference is mainly in their social nurture.

"The causes of war are problematical. The Scotch have a grim way of stating facts in absence of explanations. They are credited with giving, as the normal course of events in history, this succession: first, there is war, followed by poverty, then by peace, by prosperity, by mounting pride, and then there is war again . . . The causes assigned for war are as diverse as are the interests of their discoverers: economic advantages; territorial ambitions; racial animosities; over population, etc. In my judgment these are nearly all alternative stimuli, any one of which will serve as an excuse for aggression when a nation is well fed and well equipped and emotionally ready. Back of them all are the untamed instincts, the desire to rule and the willingness to fight."

Mrs. K. M. Chapler

SPEAKERS BUREAU ACTIVITIES

Marshall County Medical Society

An interesting program, including two scientific films, will be presented before the Marshall County Medical Society at the Hotel Tallcorn in Marshalltown, Tuesday evening, March 2. Dinner will be served at six-thirty o'clock and will be followed immediately by the scientific movies.

One of the films is entitled The Prevention and Treatment of Eclampsia, and has been prepared by the well-known obstetrician, Dr. Joseph B. DeLee of Chicago. The other film, Purposeful Splinting Following Injuries of the Hand, has been photographed in color. Drs. Sumner L. Koch, Michael L. Mason, and Harvey S. Allen of Chicago are the authors of this excellent picture.

Wayne County Medical Society

The meeting of the Wayne County Medical Society will be held as usual in Corydon, Tuesday evening, March 9, at eight o'clock.

The program will consist of a scientific recording, entitled Head Infections in Relation to General Practice, by George L. Shambaugh, M.D., of Chicago.

RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.

WOI—Wednesdays at 2:05 p. m.

March	1- 3	Services of the American Red Cross to the Armed Forces American Red Cross Public Information Service
March	8-10	Common Symptoms of Gallbladder Disease Alfred A. Eggleston, M.D.
March	15-17	Tonsillitis Joseph E. Dvorak, M.D.
March	22-24	The Value of X-ray Examination Arch S. McMillen, M.D.
March	29-31	Anesthesia Joseph W. Lawrence, M.D.

SOCIETY PROCEEDINGS

Black Hawk County

The Black Hawk County Medical Society held its February meeting in Waterloo at Black's Tea Room Tuesday evening, February 16. The guest speaker for the evening was Charles W. Rucker, M.D., of The Mayo Clinic who discussed various abnormal conditions and diseases of the eyes.

Butler County

Officers elected to serve the Butler County Medical Society during 1943 include: Dr. John G. Evans of New Hartford, president; Dr. Earl C. Kepler of Greene, vice president; Dr. Frank F. McKean of Allison, secretary and treasurer; Dr. Bruce Ensley of Shell Rock, delegate; and Dr. Evans, alternate delegate.

Calhoun County

The Calhoun County Medical Society met Thursday, February 4, at the Brower Hotel in Rockwell City. Officers elected to serve the society during 1943 are: Dr. William C. Kennedy of Somers, president; Dr. Paul W. Van Metre of Rockwell City, vice president; Dr. David C. Carver of Rockwell City, secretary and treasurer; and Dr. William W. Weber of Pomeroy, board of censors.

Clarke County

The Clarke County Medical Society has elected the following officers to serve during the present year: Dr. George I. Armitage of Murray, president; Dr. Frederick S. Bowen of Woodburn, vice president; Dr. Floyd E. Bates of Osceola, secretary and treasurer; and Dr. Conreid R. Harken of Osceola, delegate.

Fremont County

The annual meeting of the Fremont County Medical Society was held in Sidney Monday evening, January 25, with Dr. Ralph Lovelady as host. The scientific program consisted of two scientific films on sulfa drugs and a talk on scarlet fever by Leland J. Belding, M.D., Medical Director of District Health Service No. 11 with headquarters in Council Bluffs. The annual election of officers resulted in the re-election of those in office: Dr. Ralph Lovelady of Sidney, president; Dr. Kenneth Murchison of Sidney, vice president, and Dr. Ambrose E. Wanamaker of Hamburg, secretary and treasurer.

Johnson County

The February meeting of the Johnson County Medical Society was held in Iowa City at Hotel Jefferson Wednesday evening, February 3. The guest speaker for the evening was Henry R. D. Jacobs, M.D., of Evanston, Illinois, who discussed tropical diseases and made special reference to those which might be carried home by men in the service. Dr. Jacobs was graduated in 1928 from the State University of Iowa College of Medicine.

Osceola County

Officers elected to serve the Osceola County Medical Society during 1943 include: Dr. Earl P. Farnum of Sibley, president; Dr. Louis H. Heetland of Sibley, vice president; Dr. Herbert B. Paulsen of Harris, secretary and treasurer; and Dr. Wilbur F. Thayer of Ocheyedan, delegate.

Page County

The monthly meeting of the Page County Medical Society was held in Clarinda at the State Hospital Thursday evening, February 11. The scientific program, which was conducted by Norman D. Render, M.D., superintendent of the hospital, dealt with the subject of psychiatry.

Palo Alto County

The Palo Alto County Medical Society met Thursday evening, February 4, at 5:30 p. m., in the office of Dr. Paul O. Nelson in Emmetsburg. It proved to be a house warming for Dr. Nelson's new and well appointed office, which is located on West Main Street and Broadway. Dinner was served by the restaurant next door, following which the regular bimonthly meeting of the society was held. Officers elected for 1943 are as follows: Dr. Herbert M. Huston of Ruthven, president; Dr. Raymond J. Brink of Ayrshire, vice president; Dr. Paul O. Nelson of Emmetsburg, secretary and treasurer; Dr. Francis X. Cretzmeyer of Emmetsburg, delegate, and Dr. George H. Keeney of Mallard, alternate delegate.

Harold L. Brereton, M.D.

Polk County

The March meeting of the Polk County Medical Society will be held in Des Moines at Younkers Tea Room, Wednesday evening, March 17. The scientific program for the evening will be a panel discussion on medical emergencies.

Scott County

The Scott County Medical Society held its regular monthly meeting at the Lend-A-Hand Club in Davenport Tuesday evening, February 2. The guest

speaker for the evening was Dr. Blanek, who discussed Roentgenologic Diagnosis in Obstetrics and Gynecology.

Leo J. Miltner, M.D., Secretary.

Woodbury County

The February meeting of the Woodbury County Medical Society was held Thursday, February 18, at the Martin Hotel in Sioux City. The scientific program consisted of A Symposium of Hypertension with the following men from the University of Nebraska College of Medicine as speakers: Arthur L. Bennett, M.D., Associate Professor of Physiology and Pharmacology; Esley J. Kirk, M.D., Assistant Professor of Medicine, and Charles P. Baker, M.D., Pathologist.

The Journal wishes to make a correction in the officers elected to serve the society during 1943 as announced in the February issue. Dr. Robert N. Larimer was named president-elect and Dr. Earl E. Morgan was installed as president, having been named president-elect last year.

PERSONAL MENTION

Lieutenant A. J. Havlik of the Medical Corps of the United States Naval Reserve, formerly of Tama, has been awarded the Silver Star Medal. Following is a copy of the citation signed by Admiral W. F. Halsey:

"In the name of the President of the United States, the Commander of the South Pacific Area and South Pacific Force takes pleasure in presenting the Silver Star Medal to Lieutenant Aloysius J. Havlik, Medical Corps, U.S.N.R.

"For distinguished service in line of his profession as Medical Officer aboard a destroyer in action against the enemy during the battle to the northward of Santa Cruz Islands, on October 26, 1942. While his ship was being subjected to a determined enemy aerial attack, Lieutenant Havlik, with utter disregard for his own personal safety, coolly and efficiently sought out and cared for the wounded wherever they might be. His actions were in keeping with the highest traditions of the Naval Service."

Dr. Philip Cahn of Chicago has joined the medical staff of the Oakdale Sanatorium. Before locating in Oakdale, Dr. Cahn had been doing literary work for Dr. Haven Emerson, professor of public health practices at Columbia University in New York.

Dr. Charles H. Bartruff of Reinbeck spoke before the Woman's Club of Grundy Center Monday afternoon, January 21. Dr. Bartruff discussed Cardiac Diseases.

Dr. Philip Jeans, Professor of Pediatrics at the University of Iowa College of Medicine, spoke before the American Association of University Women at its meeting Saturday afternoon, February 20, in Iowa City. Dr. Jeans' subject was Nutrition and the War.

Dr. F. Harold Entz of Waterloo was guest speaker at the regular meeting of the Cedar Falls Rotary Club Wednesday, February 3, at which time he discussed Venereal Disease Control.

Dr. Laydon S. Wentworth of Marble Rock spoke before the Lions Club of Charles City at its meeting Friday, February 12. He chose for his subject The Sulfa Drugs, Their Use and Abuse.

Dr. Hajo P. Plagge has recently joined the medical staff of the Clarinda State Hospital. Dr. Plagge came to Clarinda from San Francisco, California.

MARRIAGE

Miss Mollie Bauman of Des Moines, daughter of Mr. and Mrs. Stephen Bauman of Whittemore, and Dr. James W. Chambers, formerly of Des Moines, were united in marriage at the Catholic Rectory in Whittemore Thursday morning, February 4. Dr. Chambers is now a First Lieutenant in the Army of the United States and is stationed at Fort Riley, Kansas.

DEATH NOTICE

Sherman, Elmer Emmett, of Keosauqua, aged eighty-one, died February 12 following an illness of several months. He was graduated in 1898 from the College of Physicians and Surgeons in Keokuk, and at the time of his death was a member of the Van Buren County Medical Society.

PREVALENCE OF DISEASE

Disease	Jan. '43	Dec. '42	Jan. '42	Most Cases Reported From
Diphtheria	22	12	17	For the State
Scarlet Fever	234	251	168	Polk
Typhoid Fever	3	4	4	Black Hawk, Buchanan, Polk
Smallpox	3	3	2	Woodbury, Lyon
Measles	287	192	426	Washington, Woodbury, Polk, Black Hawk
Whooping Cough	91	144	85	Dubuque, Linn
Brucellosis	41	33	14	For the State
Chickenpox	417	497	508	Dubuque, Woodbury
German Measles	98	22	1	Boone, Story
Influenza	17	0	7	Mitchell
Mumps	332	162	510	Boone, Calhoun, Story, Webster
Pneumonia	147	86	227	Clinton
Poliomyelitis	2	5	2	Polk
Tuberculosis	96	55	18	Polk
Tularemia	4	1	2	Benton, Dickinson
Gonorrhea	121	113	105	For the State
Syphilis	258	263	134	For the State

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. FRANK M. FULLER, Keokuk
DR. PAUL E. GARDNER, New Hampton
DR. JOHN T. McCLINTOCK, Iowa City
DR. HENRY G. LANGWORTHY, Dubuque
DR. WALTER L. BIERRING, Des Moines

A History of Medicine in Plymouth County

WENDELL L. DOWNING, M.D.,
Le Mars, Iowa

(Continued from last month)

Dr. William C. Bundy, who was in Le Mars in 1887, was born in Ohio and was a graduate of the University of Illinois College of Physicians. Dr. W. F. George, who was born in Maine and was a graduate of the Bowdoin Medical School, located in Le Mars in 1887. Nothing further is known concerning either of these doctors.

Dr. C. M. Hillenbrand was born in Germany and came to America as a child in 1855. He grew to manhood in Freeport, Illinois, but later returned to Germany where he was graduated in 1890 from a Berlin medical school. After many years of successful practice here, he moved to South Dakota where he took up ranching. He died there about 1914. Two of his sons, Art and Homer, excelled in local athletics in the gay nineties and later were outstanding athletes at Princeton University.

Dr. Mary Breen, whose brother was a dentist in Le Mars, has the distinction of being the only woman physician to practice in Le Mars. She was of Irish extraction and was graduated from the medical school of the University of Iowa about 1890. She came to Le Mars in 1890 and enjoyed a large practice for fifteen years. In 1905 Dr. Breen moved to San Francisco, where she is still living. She is a well-educated, cultured woman physician.

Dr. Alexander Sabin was born in Ohio and was a graduate of the Bennett College of Eclectic Medicine, Chicago. He located in Le Mars for a short time in 1891.

Dr. Thomas E. Cole was born in Champaign, Illinois, April 13, 1861. He received his Bachelor of Science degree from the University of Illinois in 1885 and his Doctor of Medicine degree from the same university in 1890. In that same year Dr. Cole was married to Anna Smith of Huron, Ohio. After locating in Plainfield, Illinois, he came to Le Mars in 1892. After forty-six years of successful practice, Dr. Cole retired in 1936, and both he and Mrs. Cole are living and in good health. He was and is an outstanding Le Mars citizen, active in all civic enterprises.

Dr. Robert Somers was born in Toronto, Canada, in 1872 and was graduated in 1894 from the Toronto Medical College. For nine years he was a successful Le Mars physician. He was a large, handsome, blond man who was an excellent mixer and was a pianist in demand at all home talent theatricals. Dr. Somers' wife died in Le Mars about 1903, leaving him and their one child. In 1905 Dr. Somers died of pneumonia, and, quoting an old settler, "there was much mourning in Le Mars when he died." Dr. Somers was buried in his native Canada.

Dr. Goeke H. Mammen of Chicago was born March 14, 1872, in Sterling, Illinois, and at twelve years of age he moved to Le Mars. He attended Northwestern Normal College and was graduated in 1894 from Rush Medical College. The same year he located in Le Mars. In 1896 he was married to Emma Ahrensfeld. He enjoyed a large practice in Le Mars and was a pioneer Le Mars surgeon. He was a local railroad surgeon, an organizer and owner of two Le Mars hospitals, and one of the founders of the Le Mars Clinic. Since 1913 he has been a Fellow of the American College of Surgeons. In 1919 Dr. Mammen moved to Chicago where he is now in practice and is associated with his son, Dr. Donald, a dentist. He is a member of the staff of the Lutheran Deaconess Hospital in Chicago, the Chicago Medical Society, and the American Medical Association.

Dr. C. F. Kuney was a graduate of the University of Iowa College of Medicine in about 1888.

While in school he supported himself by being a barber in Iowa City. After practicing a short time in Danbury, Iowa, Dr. Kuney came to Le Mars in 1895, at which time he was approximately thirty-five years of age. In 1905 he moved to Oklahoma where he was very successful in the oil business. He died in California in 1939.

Dr. William Voght, a graduate of the University of Iowa College of Medicine, was located in Le Mars for a brief time in 1896.

Other early physicians who located in the county and about whom no information is available are Dr. A. La Rue, 1884; Dr. Lee, 1881; Dr. Bennett and wife, both physicians in Le Mars for two years; and a Dr. Warren.

Dr. Jesse L. Reeves of Le Mars was born in Fremont County, Iowa, in 1873. He was graduated in 1896 from the Drake University College of Medicine. He took postgraduate courses at the Chicago Polyclinic in 1897. In 1898 Dr. Reeves located in Le Mars where he is still in active practice. In 1899 he was married to Myrtle Symons of Le Mars, who died in 1913. In 1921 he married Mabel McDonald of Sioux City. They have three children, two sons, Arthur and Robert, and a daughter.

Dr. William T. Shepard of Palo Alto, California, is the son of Dr. William Shepard of Oberlin, Ohio, and the grandson of William M. Shepard, one of the founders of Oberlin College. Dr. Shepard was born in Oberlin, October 12, 1865, and, like his father, was a graduate of the Hahnemann Medical College of Chicago. Two of Dr. Shepard's brothers were also physicians, Dr. Edward of Wisconsin and Dr. Charles of Ord, Nebraska. In 1887 Dr. Shepard was married to Vinnie Teale of Dundee, Illinois, and two sons were born to them, Drs. William P. and Charles of Palo Alto. A son of Dr. Charles Shepard of Ord is also a physician, a graduate of Northwestern University Medical School, and is now with the United States Public Health Service. In all, seven Shepards have been medical graduates, six in practice at one time. After five years of practice in Denver and Hull, Iowa, Dr. Shepard located in Le Mars in 1899. He enjoyed a large general practice in Le Mars, later limiting his work to internal medicine. He was one of the founders of the Le Mars Clinic. In 1934 Dr. Shepard retired and moved to Palo Alto, where Mrs. Shepard died in 1938. Dr. Shepard still lives in Palo Alto. He enjoys good health and is an annual visitor in Le Mars.

Dr. R. H. Foster was located in Le Mars for a few years about 1898. He was a large, handsome man but not a successful practitioner. He was associated with Dr. Hackett for a short time, later moving to Chicago where he assisted Dr. G. H. Mammen for a brief time in the early twenties.

Dr. Floyd S. Clarke of Omaha, Nebraska, was born in Le Mars, August 4, 1875. He attended Cornell College and was graduated in 1900 from the Medico-Chirurgical College in Philadelphia. After an internship at the Philadelphia General Hospital from 1900 to 1902, he began practice in Le Mars in 1904. In 1915 Dr. Clarke left Le Mars and took postgraduate work in pediatrics at the New York Postgraduate School for two years. In 1917 he located in Omaha where he is still in the practice of pediatrics. He was Clinical Professor of Pediatrics at Creighton University School of Medicine from 1919 to 1924, and since 1924 has been Professor and Head of the Department of Pediatrics at the same school. During 1920 and 1921 he took postgraduate work in Scotland, England, and Germany. Among other memberships, he is a member of the American Academy of Pediatrics and is certified by the American Board of Pediatrics. In 1907 Dr. Clarke was married to Emma Cannon of Sussex, New Jersey, and they have two daughters, Margaret and Marian, both married.

Dr. Arthur Hale Mosher was born October 20, 1860, in Andalusia, Illinois, where he later studied in the office of a local physician. He was graduated in 1882 from Rush Medical College in Chicago. Dr. Mosher began practice in Buffalo Prairie, Illinois, in 1882. In the fall of 1883 he located in Ireton, Iowa, and then moved to Le Mars in 1904. In 1916 he organized the Mosher Hospital. After many years of successful practice, Dr. Mosher retired in 1928. He was married to Cassie Buffum of Andalusia in 1881, and they had three daughters, one of whom, Mrs. Raber, lives in Le Mars. In 1938 Dr. Mosher died in Le Mars at seventy-eight years of age.

Dr. R. P. Wilde was graduated in 1903 from the University of Iowa College of Homeopathic Medicine. He was located in Le Mars from 1903 until 1914, when he moved to Traer, Iowa. About 1940 Dr. Wilde was killed in a car accident.

Dr. James M. Fettes of Spencer, Iowa, was born in Canada and was graduated in 1904 from the Trinity Medical School in Toronto. From 1905 until 1927 he played a prominent part in medicine and hospital development in Le Mars. At his own request that he not be mentioned in this history, nothing further will be written concerning him.

Dr. William D. Farrell was born in 1876 and was graduated in 1899 from Cornell University Medical College. After four years' practice in Le Mars he moved to Aberdeen, South Dakota,

in 1911, where he is still in practice and is limiting his work to obstetrics and gynecology.

Dr. Roy F. Bellaire was born in Winona, Minnesota, in 1884. He was graduated in 1909 from St. Louis University. From 1910 to 1915 he was in general practice in Le Mars. Dr. Bellaire then took two years of postgraduate work in roentgenology in New York, after which he located in Sioux City. During the World War he was in the Navy Medical Corps. He was commander of Monahan Post in 1925. In 1911 Dr. Bellaire was married to Mary Ramsey of St. Louis. They had one son, Richard, who was graduated in 1940 from Harvard Medical College, and who now is in the medical corps of the army. In 1931 Dr. Bellaire died of bacteremia. His widow now lives in Daytona Beach, Florida, and his mother lives in Le Mars.

Dr. C. R. Mullong of Norfolk, Nebraska, was born in Des Moines in 1884. He attended Le Mars schools and Western Union College and was graduated in 1909 from the Sioux City College of Medicine. After an internship at St. Joseph Hospital in Sioux City, Dr. Mullong located in Le Mars in 1910. In 1913 he moved to Norfolk, where he operates the city hospital and has enjoyed a successful practice. He is on the staff of the Lutheran Hospital and limits his work to surgery. Dr. Mullong has written several short stories for popular magazines. He was married to Ethel Givers of Sioux City and they have one son, Richard, born in 1921.

Dr. Alex Fettes of Ontario, Canada, a graduate of the University of Toronto Medical School, spent one year, 1914, in practice in Le Mars, where he was associated with his brother. He has since practiced in Calgary, Canada.

Dr. William W. Larsen was born January 5, 1883, in Decorah, Iowa. He attended Luther Academy and, after working for two years in Chicago, he was graduated in 1913 from the medical school of the University of Iowa. After one year of general practice in Buxton, Iowa, Dr. Larsen located in Le Mars, being associated with Drs. Fettes and Joynt. During 1917 and 1918 he took postgraduate work in roentgenology in Boston. He later limited his work to that specialty and internal medicine. He was one of the founders of the Le Mars Clinic. Dr. Larsen was a member of Nu Sigma Nu, the Iowa X-ray Society, and was secretary for several years. He was also a member of the Radiological Society of North America, and in 1938 he became a diplomate of the American Board of Roentgenology. Other memberships included the Board of Pensions, postal examiner and physician to the Illinois Central Railroad. In 1916 he was married to Ellen Bolser of Le Mars and their two children are Dorothy, a graduate of Carleton College and Catherine Gibbs Secretarial School who is now employed in New York, and Marjorie, a senior at Carleton College. Dr. Larsen died January 20, 1939, after a year's illness from a sarcoma of his arm.

Dr. Joseph A. Lamb was born in Independence, Iowa, in 1875. In 1904 he was graduated from the University of Kansas School of Medicine. From 1905 until 1915 Dr. Lamb was in practice in Kansas City, Kansas. From that time until his death in 1935 he was in active practice in Le Mars. Mrs. Lamb, an invalid for many years, died in 1933. One son, Tom, died from a diving accident, and a daughter, Agnella, Mrs. Joe Kass, lives in California.

Dr. Martin Joynt of Le Mars was born in Emmetsburg, November 7, 1878. His brothers in the profession are: Michael F. Joynt, Marcus (Iowa, 1910); Albert J. Joynt, Waterloo (Iowa, 1912); and Robert Joynt, D.D.S., Le Mars (Iowa, 1907). Dr. Joynt taught country school for two years, after which he went to college and was graduated in 1905 from the State University of Iowa College of Medicine. From 1905 until 1915 Dr. Joynt was in general practice in Jesup, Iowa. In 1913 he took postgraduate work in eye, ear, nose, and throat at the Mills Eye Hospital and Jefferson Medical College in Philadelphia. In 1915 he took additional postgraduate training at the Manhattan Eye, Ear, Nose, and Throat Hospital in New York. Locating in Le Mars in 1915, he has since limited his work to that specialty. Dr. Joynt was one of the founders of the Le Mars Clinic and is a member of the American Academy of Ophthalmology and Otolaryngology, and is on the staff of the Sacred Heart Hospital. In 1918 and again in 1941 he was one of the Selective Service Examiners. He was married in 1907 to Regina Rooney, R.N., of Dubuque. One daughter was born in 1908 and died in 1914, and a son, John, an attorney, is located in Des Moines.

Dr. A. Jay was located in Le Mars for a brief period in 1915. He had previously been in the Army Medical Corps in the Philippines but had retired because of ill health. He died a few years later of hypertensive heart disease.

Dr. Joseph N. Gehlen of St. Paul, Minnesota, was born in Le Mars, January 5, 1892. In 1914 he received his Bachelor of Science degree from St. Martin's College in Lacey, Washington, and in 1918 he was graduated from the Creighton University School of Medicine. He then entered the United States Naval Reserve as Lieutenant

(junior grade) and was attached to the United States Naval School in Washington, D. C., and the Naval Hospital, Providence, Rhode Island, until 1919 when he was discharged with the rank of Lieutenant. Dr. Gehlen was associated with the Le Mars Clinic for one year, 1919 to 1920. From 1920 until 1926 he was associated with the Minnesota State Board of Health, and since 1926 he has been in private practice in St. Paul, limiting his work to internal medicine. In 1918 he was married to Viola Berg of Le Mars and they have two children, Donald and Richard. Dr. Gehlen is a member of the staff of the Ancker, Miller, St. Joseph's, and St. Luke's Hospitals in St. Paul.

Dr. Wendell L. Downing of Le Mars was born in Moulton, Iowa, July 28, 1894. His father, Dr. William L. Downing, who was graduated in 1886 from Rush Medical College, is still in practice at the age of eighty years. Dr. Wendell Downing attended Drake University from 1912 to 1914 and received a Bachelor of Arts degree from the University of Minnesota in 1916. In 1920 he was graduated from the medical school of the University of Minnesota. During 1917 and 1918 he was associated with the Department of Pathology at his alma mater. After a sixteen months' internship at the Philadelphia General Hospital, Dr. Downing in 1920 became associated with the surgical work of the Le Mars Clinic. Among his memberships are Beta Theta Pi, Nu Sigma Nu, Alpha Omega Alpha, American College of Surgeons (1928), State Urological Society and American Legion (Post commander 1926). He is also a Deputy Councilor of the Iowa State Medical Society and has been the head examiner for Selective Service from 1940 to date. Dr. Downing is the author of twelve articles which have been published in national and state medical journals. In 1922 he was married to Marion Klenk of Easton, Minnesota, and their three children are Margaret, a freshman at Carleton College; Helen, who died in 1934 at the age of eight years, and Wen K., a junior high school student.

Dr. Archibald C. McPhaden of Concrete, Washington, was born in Canada in 1883. In 1911 he was graduated from the Bennett College of Eclectic Medicine and Surgery in Chicago. After practicing in Belden, Nebraska, from 1912 until 1921, he located in Le Mars, being associated with the Le Mars Clinic. In 1927 Dr. McPhaden moved to Concrete, Washington, where he lives with his wife, a son and daughter.

Dr. Charles Shepard of Palo Alto, California, was born in Denver, Colorado, in 1898. After attending the Le Mars schools he attended the University of Minnesota where he received the following degrees: B.S. in 1920, M.A. in 1922, and M.D. in 1924. From 1922 until 1924 he was a teaching fellow in the Department of Physiology and in 1921 he was a research fellow at the Marine Biology Station at Woods Hole, Massachusetts. From 1924 until 1926 he was associated with the Le Mars Clinic. He then was associated with the Cragmor Sanatorium in Colorado Springs, Colorado, for two years, after which he located in Palo Alto. He has been associated with the Stanford Medical School Health Department since 1927, being Professor of Hygiene and Director of the Student Health Department. He is now on leave with the United States Public Health Service with the rank of Surgeon. Among Dr. Shepard's memberships are Sigma Xi, Nu Sigma Nu, American Public Health Association, member and former president American Student Health Association. In 1925 he was married to Blanche Lindsay of Montpelier, Utah, a former science instructor at Oberlin College. They have two sons, David and Bill.

Dr. William P. Shepard of Palo Alto, California, was born in Hull, Iowa, July 6, 1895. He attended the Le Mars schools and obtained the following degrees from the University of Minnesota: B.S. in 1920, M.D. in 1922, and M.A. in 1924. During 1916 and 1917 he was Staff Sergeant with the First Minnesota Artillery on the Mexican Border and during the World War he was Master Hospital Sergeant with Base Hospital 26 on active duty in France for eighteen months. He later became a First Lieutenant in the Sanitary Corps. Returning to the United States, he completed his medical work in 1922. From 1922 until 1924 Dr. Shepard was associated with the Student Health Service at the University of Minnesota. In 1924 he was associated with the Le Mars Clinic for six months. Returning to the Public Health field, he has been the Medical Director of the Berkeley Public Schools from 1924 to 1926; Medical Director of the Metropolitan Life Insurance Company in charge of Pacific coast states, with offices in San Francisco, since 1926; Clinical Professor of the Department of Preventive Medicine, Stanford Medical School, since 1932. Among Dr. Shepard's memberships are Sigma Xi, Nu Sigma Nu, Alpha Omega Alpha, and American Public Health Association (director). He has written numerous articles for health journals. In 1918 he was married to Lucia Cary of Minneapolis and three children were born, one dying in infancy.

(To be continued next month)

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ATHLETIC INJURIES: PREVENTION, DIAGNOSIS AND TREATMENT—By Augustus Thorndike, M.D., associate in surgery, Harvard Medical School. Second edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, $3.00.

ELECTROTHERAPY AND LIGHT THERAPY—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. Fourth edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, $8.00.

THE 1941 YEAR BOOK OF PHYSICAL THERAPY—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1941. Price, $3.00.

THE 1941 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—Edited by Joseph B. DeLee, M.D., professor of obstetrics, University of Chicago Medical School; and J. P. Greenhill, M.D., professor of obstetrics and gynecology, Loyola University Medical School. The Year Book Publishers, Chicago, 1942. Price, $3.00.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY—By Jerome E. Andes, M.D., director of department of health, University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, $4.00.

PEDIATRIC GYNECOLOGY—By Goodrich C. Schauffler, M.D., assistant clinical professor of obstetrics and gynecology, University of Oregon Medical School. The Year Book Publishers, Chicago, 1942. Price, $5.00.

STARLING'S PRINCIPLES OF HUMAN PHYSIOLOGY—Edited and revised by C. Lovatt Evans, D.Sc., Jodrell professor of physiology in University College, London; the chapters on the special senses revised by H. Hartridge, M.D., professor of physiology at St. Bartholomew's Medical College. Eighth edition. Lea and Febiger, Philadelphia, 1941. Price, $10.00.

SYNOPSIS OF ALLERGY—By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, $3.00.

ENCEPHALITIS: A CLINICAL STUDY—By Josephine B. Neal, M.D., clinical professor of neurology, College of Physicians and Surgeons, Columbia University. Grune and Stratton, New York, 1942. Price, $6.75.

CLINICAL ANESTHESIA—By John S. Lundy, M.D., head of section on anesthesia, Mayo Clinic; professor of anesthesia, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota. W. B. Saunders Company, Philadelphia, 1942.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES—By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, $4.50.

SYNOPSIS OF DISEASES OF THE HEART AND ARTERIES—By George R. Herrmann, M.D., professor of medicine, University of Texas. The C. V. Mosby Company, St. Louis, 1941. Price, $5.00.

WAR MEDICINE—Edited by Winfield Scott Pugh, M.D., Commander (M.C.) U.S.N., Retired; formerly surgeon, City Hospital, New York. Philosophical Library, Inc., New York, 1942. Price, $7.50.

FUNDAMENTALS OF PSYCHIATRY—By Edward A. Strecker, M.D., professor of psychiatry and chairman of the department, Undergraduate School of Medicine, University of Pennsylvania. J. B. Lippincott Company, Philadelphia, 1942. Price, $3.00.

FRACTURES—By Paul B. Magnuson, M.D., associate professor of surgery, Northwestern University Medical School, attending surgeon, Passavant Memorial Hospital and Wesley Memorial Hospital, Chicago. Fourth edition, revised. J. B. Lippincott Company, Philadelphia, 1942. Price, $5.50.

BOOK REVIEWS

CARCINOMA AND OTHER MALIGNANT LESIONS OF THE STOMACH

By Waltman Walters, M.D.; Howard K. Gray, M.D.; and James T. Priestley, M.D., of the Mayo Clinic and Mayo Foundation. W. B. Saunders Company, Philadelphia, 1942. Price, $8.50.

This is not just another book on cancer of the stomach. It could not have been originated any other place than at the Mayo Clinic. So far as I am aware, there is no other place in the world where the record of 11,000 patients with malignant lesions of the stomach could be assembled and critically analyzed. This volume is the result of such an analysis, and it is most interesting reading for any doctor and especially those doing gastro-intestinal surgery. The bibliography accompanying each chapter is complete and shows how thoroughly the subject has been covered.

The newer methods of diagnosis are given and evaluated in a clear and concise manner. The chapter on gastroscopy and intragastric photography is most enlightening, but for the present at least this is beyond the realm of those outside the larger clinics.

Details of preoperative preparation and the surgical technic are most clearly set forth. The chapter on anesthetics employed is most helpful and should be read by all anesthetists. Then, in the final chapters, the postoperative care and end results of this extensive experience reveal the seriousness of the malignant lesions of the stomach. It is pointed out very clearly that early diagnosis is essential and offers the only hope of a cure. This is graphically shown by a chart on page 483. Resection of the malignant lesions offers the only hope for these patients.

It is a most worthwhile book. G. M. C.

A TEXTBOOK OF NEURO-ANATOMY

By Albert Kuntz, M.D., professor of micro-anatomy, St. Louis University School of Medicine. Third edition. Lea and Febiger, Philadelphia, 1942. Price, $6.00.

This five hundred and seventeen page book comprises a comprehensive textbook of neuro-anatomy which is especially appropriate for students or as a reference book. It presents this intricate subject in a clear-cut, well-illustrated manner. It is accompanied by reference to current literature and, unlike most textbooks, each chapter has a summary of the material covered. The chapter on laboratory outline is thorough and complete, fulfilling the need of a general textbook on this subject. A list of all literature on general neuro-anatomy is appended which is convenient for quick reference. W.E.A.

HANDBOOK OF TREATMENT

By Edward A. Millen, M.D., instructor in materia medica, University of Pennsylvania Medical School. Fourth revised edition. F. A. Davis Company, Philadelphia, 1942.

This text is a modern and timely reference for everyday problems in therapeutic medicine. The author has arranged the main portion of the text alphabetically to include all the common diseases. The accepted methods of treatment for each disease are described, and various selected prescriptions follow, which afford the reader a generous choice.

The appendix to this volume includes discussions of intravenous therapy, hypodermic medication, fluid foods, diet lists for various diseases, fractures and sprains, a section on differential diagnosis which tabulates the clinical findings in some of the more important disease conditions, a physician's dose table, and some of the more important poisons with the antidotes.

The last section of the text is called the Physician's Interpreter and lists many important medical personal questions in English, French, German, Italian and Spanish.

The volume is an excellent therapeutic guide for the busy practitioner. J. W. C.

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1941.

American Medical Association, Chicago, 1942. Price, $1.00.

This volume contains in compact form not only the reports of the Council which have been published in the *Journal* during the past year, but also some additional reports which were not considered of sufficient importance to be published in the *Journal*. The reports may be divided into four classes: reports rejecting products as not being acceptable for inclusion in New and Nonofficial Remedies, reports omitting from New and Nonofficial Remedies products that have previously been accepted, reports on the nomenclature of various substances and reports in which the Council gives decisions of general interest or summarizes the latest scientific knowledge concerning certain topics. The last classification includes the largest number of reports.

One article deals with the developments in bacteriophage therapy since the previous report of the Council in 1934. Other reports bring to the present day the status of such products as aluminum hydroxide preparations, antipneumococcic serums, cyclopropane, human blood plasma and serum, human convalescent poliomyelitis serum, human convalescent mumps serum and sulfadiazine. Such topics as ion transfer (iontophoresis), halogenated vegetable oils for bronchography and the problem of lipid pneumonia and the sympathomimetic amines as epinephrine substitutes are discussed. The nomenclature reports deal for the most part with the Council's adoption of nonproprietary designations for comparatively new products such as diethylstilbestrol, menadione and sulfadiazine. Explanations are given for the omission at this time of products which have previously been included in New and Nonofficial Remedies. The volume also includes the reports rejecting various products which have either been submitted by the manufacturer or considered on the Council's own initiative and which have been found not acceptable for inclusion in New and Nonofficial Remedies. Also incorporated is a brief summary of the decisions arrived at by the Council at its latest meeting.

THE PATHOLOGY OF TRAUMA

By Alan Richards Moritz, M.D., professor of legal medicine, Harvard Medical School. Lea & Febiger, Philadelphia, 1942. Price, $6.00.

In this well-planned book the author has collected and described the pathologic phases of mechanical violence as it affects all the systems of the body. It bears the stamp of authoritative experience, and, while largely based upon the studies of the Boston group, long known for their leadership in the development of legal medicine, it also contains material from Karsner in Cleveland, Ash of the Army Medical Museum, and some European investigators. Both the gross and microscopic lesions are illustrated by 117 carefully chosen engravings which enhance the word descriptions. These changes are correlated with the clinical pictures and the pathologic physiology. To the reviewer's knowledge, this is the first time all this material has been considered in a single volume. Its scope is indicated by the chapter headings: Mechanical injuries; trauma and infection; trauma and tumors; mechanical injuries of the cardiovascular system; mechanical injuries of the respiratory system; mechanical injuries of the alimentary canal; mechanical injuries of the liver, gallbladder, bile passages, pancreas and spleen; mechanical injuries of the urogenital tract; mechanical injuries of the central nervous system; and mechanical injuries of the skeletomuscular system.

While of the greatest interest to pathologists, medical examiners and workmen's compensation authorities, it is nearly of equal interest to general physicians, since in this machine age a large part of their practice is concerned with the effects of trauma. The text is especially timely for members of the profession who are entering the armed services. At no other single source will they find as comprehensive a discussion of the pathology and the pathologic physiology of trauma in general and especially those types of injuries with which they will be concerned while in the service. Finally, a representative bibliography at the end of each chapter completes the text and is of great value in choosing collateral reading. F. P. McN.

THE 1941 YEAR BOOK OF GENERAL MEDICINE

Edited by George F. Dick, M.D., J. B. Amberson, Jr., M.D., George R. Minot, M.D., William B. Castle, M.D., William D. Stroud, M.D., and George B. Eusterman, M.D. The Year Book Publishers, Chicago, 1941. Price, $3.00.

This condensed resumé of general medicine is of the usual high quality. The text surveys the most recent articles written in the field of medicine. Where applicable, the various editors add timely remarks to the condensation of an individual medical report.

The section on infectious diseases is edited by George F. Dick, M.D.; diseases of the chest by J. Burns Amberson, Jr., M.D.; diseases of the blood, blood forming organs, and diseases of the kidney by George R. Minot, M.D., and William B. Castle, M.D.; diseases of the heart and blood vessels by William D. Stroud, M.D.; and Diseases of the digestive system and of metabolism by George B. Eusterman, M.D.

This text is a most timely method of keeping the general practitioner abreast of the new trends in medicine.

J. W. C.

PRINCIPLES OF EXTRAPERITONEAL CAESAREAN SECTION

By James V. Ricci, M.D., associate clinical professor of gynecology and obstetrics, New York Medical College; and James Pratt Marr, M.D., associate attending surgeon, Woman's Hospital, New York. The Blakiston Company, Philadelphia, 1942. Price, $4.50.

The monograph presented by these authors is devoted in its entirety to the exposition of the principles of the extraperitoneal cesarean section. The objective of the extraperitoneal approach is to circumvent the general peritoneal cavity, and thus reduce the risk of cesarean section in the neglected and infected patient. When it becomes necessary to deliver by cesarean section, either the potentially infected or the actually infected patient, the extraperitoneal approach is the procedure of choice. It prevents as much as humanly possible the contamination of the general peritoneal cavity and thus minimizes the risk of pertitonitis, the largest single cause of mortality in these infected parturient patients.

The historic background and history of the development of the extraperitoneal section is presented. The different types of lower uterine segment technics, peritoneal exclusion cesarean sections, and extraperitoneal cesarean sections are discussed in detail from the standpoint of the differences of technic. The anatomy and histology of the lower uterine segment, as well as the fascia and its relationship to the bladder, uterus and peritoneum, are discussed in their application to the various technics and mechanics of the extraperitoneal section. One chapter is devoted to a classification and description of the different technics of extraperitoneal section and the following chapter gives a step-by-step description of that particular procedure recommended by the authors, the Physick-Sellheim extraperitoneal cesarean section. The last chapter is concerned with a discussion of the operative and postoperative complications.

While it is obvious that the urgent need for this extraperitoneal approach is not frequently encountered in the well-conducted and supervised obstetric clinic or practice, the obstetrician should be familiar with the extraperitoneal operation in order to handle the infected patient as skillfully as possible. Every obstetrician should have as a part of his armamentarium a thorough understanding of the principles of the extraperitoneal approach. The careful execution of this operation would add a great measure of safety to the obstetric patient whose life is endangered by these serious complications of labor.

The book is well written, but its readability is not enhanced by the unusually large number of references to the publications and works of other authors.

A. W. B.

FUNDAMENTALS OF PSYCHIATRY

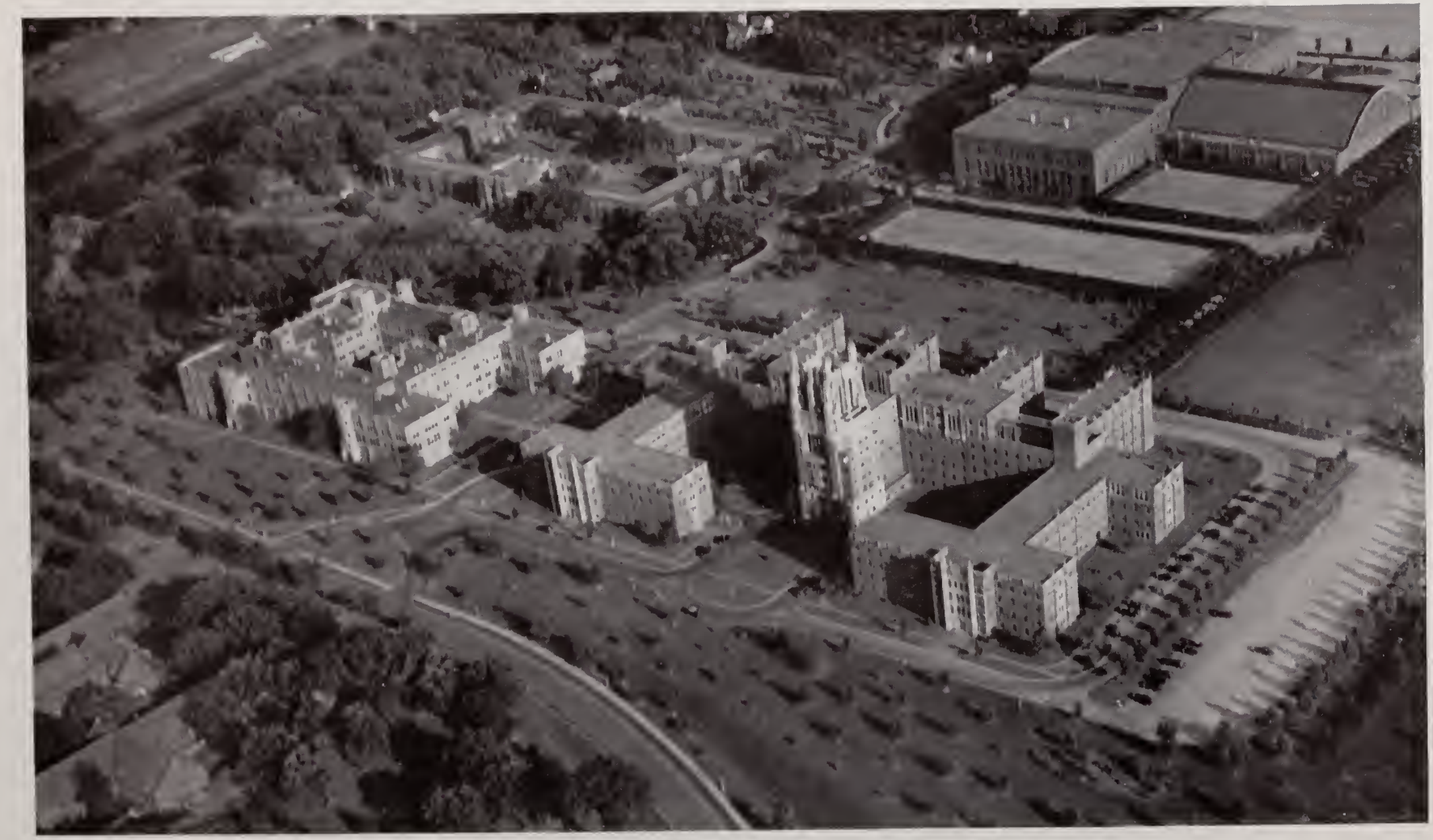
By Edward A. Strecker, M.D., professor of psychiatry and chairman of the department, Undergraduate School of Medicine, University of Pennsylvania. J. B. Lippincott Company, Philadelphia, 1942. Price, $3.00.

This conveniently-sized two hundred and one page volume is a comprehensive, yet brief outline of the major features of psychiatry which includes classification, diagnosis and treatment of mental diseases. For any physician or medical student, it should serve as an efficient guide to modern psychiatric generalizations and facilitate the pursuit of more formal and technical reading. The subject matter of this instructive book is richly illustrated by case histories and clinical allusions.

F. A. E.

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Air View of the University Hospitals, State University of Iowa

The JOURNAL
of the
Iowa State Medical Society

VOL. XXXIII DES MOINES, IOWA, APRIL, 1943 NO. 4

To the Members of the Iowa State Medical Society:

It is with real pleasure that we present to you this College of Medicine issue of our State Medical Journal. The request of your Editor that we furnish the material for the April number met with so generous a response from our faculty that extra space was necessary to include all the papers in one issue.

I wish to express to the members of our State Medical Society the appreciation of the faculty of the College of Medicine for the splendid cooperation we have received in these most trying times. It is our desire to give you the maximum service possible. When reports are delayed or we cannot accept your patients as promptly as you desire, please remember that more than one hundred members of our regular staff are now serving in the armed forces and that our ancillary services are equally depleted. Many inexperienced persons must be trained to replace those who have joined the military forces or who are engaged in other defense work.

Our congratulations go to the members of the State Medical Society who have maintained the traditions of American Medicine by their prompt response to the call to service in the army and navy. Iowa as usual has more than met its quota. A special word of greeting and commendation is given to the many veterans, who in order to insure adequate medical care for our people have, at considerable personal sacrifice, cheerfully filled the vacancies left by the younger men, to carry on that great tradition, that come what may, suffering must be relieved.

To our alumni and to all other members of the State Medical Society now with our fighting forces, may God grant that the day of peace be hastened and that we may very soon welcome you home.

Cordially yours,

E. M. MacEwen, M.D., Dean

SYMPOSIUM ON PRE- AND POST-OPERATIVE CARE OF THE SURGICAL PATIENT*†

PREOPERATIVE CARE IN ABDOMINAL SURGERY

ROBERT N. BARTELS, M.D.

The following factors in preoperative care must be considered to permit the patient to come to operation in the best possible condition:

HOSPITALIZATION AND PSYCHIC FACTORS

All elective cases need to be hospitalized to allow ample time for proper study of the patient and for the necessary corrective procedures to be carried out. Hospitalization allows certain psychic factors, such as fear, to be overcome. The patient can adjust to the strange atmosphere of the hospital and become acquainted with the hospital staff and nursing personnel. His confidence should be gained and the nature of the impending operation explained so that he is prepared for future developments, such as the establishment of a colostomy or multiple stage procedures.

As a minimum, patients should be admitted the day before operation, even in simple cases. In some instances the nature of the disease and the magnitude of the operation may require several days of hospitalization.

SPECIAL PROBLEMS

Every patient presents an individual problem; however, children, the aged, and the obese patient demand special consideration.

In children, malnutrition, dyhydration, and depletion of liver glycogen take place rapidly, especially with diarrhea or vomiting.

Degenerative diseases in the aged patient add to the dangers of surgery. Special effort should be made to correct cardiorenal disease, urinary tract obstruction, and prevent pneumonia. An optimistic attitude with these elderly patients is important.

In elective procedures on obese patients, we prefer to place them on a reducing diet and delay operation until they have lost fifty to one hundred pounds. A few days immediately preceding the operation they are put on a complete general diet, and they should have gained weight, two to five pounds, before the operation.

HEART DISEASE IN SURGERY

Actually, there are only two cardiac problems which concern the surgeon. These are congestive failure and acute coronary occlusion. On occasion, operations may be necessary even in these patients, and should be performed. In such doubtful cases, we have been impressed with the infrequency of cardiac deaths.

No test of cardiac reserve is more important than the information gained from a careful history. In general, a person with heart disease who is able to carry out his ordinary activities of daily life can undergo a major operation without danger of developing failure as a result of the procedure. The functional capacity of the heart is the important factor.

DIET

An adequate diet is important. One is usually concerned with the prevention of partial deficiency and building up reserves. Many patients have been on a limited diet, and these borderline states of nutritional deficiency are more common than is usually appreciated. For the majority of patients, the general hospital diet is satisfactory. Additional vitamins should be given to those patients deficient in these substances.

Special dietary measures are used in certain cases. Patients with biliary tract disease are given a high carbohydrate, high protein, low fat diet. Gastric cases, peptic ulcer and carcinoma are given a soft or smooth ulcer diet. A few days before operation they are given a full liquid diet. Patients with carcinoma of the colon or rectum are given a soft diet and then changed to a clear liquid diet two days before operation. Residue is thus reduced to a minimum.

For the immediate preoperative period, nothing by mouth after midnight is routine for patients to be operated upon the next morning. If the patient

Editor's Note: **All of the scientific articles in this issue of the Journal have been prepared by members of the faculty of the College of Medicine at the State University of Iowa at the special request of the Publication Committee of the Iowa State Medical Society. The Committee had several ideas in mind in making the request. Primarily it was felt that such an issue would have a particular appeal and value to the College's alumni, many of whom are in service both at home and abroad. Furthermore, as the result of decreased contributions, the Journal was in need of high quality material for the information of its readers. The response of the College was so generous and so completely cooperative that it has earned the heartfelt thanks of all of us. Finally, the Journal takes no little pride in this opportunity to call attention to the achievements of one of the country's top-ranking medical schools.**

*From the Department of Surgery.
†Presented before the Johnson County Medical Society, Iowa City, January 6, 1943.

is scheduled for late afternoon, especially a child, a liquid breakfast is given.

In emergency cases, nothing by mouth is ordered as soon as the patient enters the out clinic department. If these patients have had an oral intake during the previous six hours, induced vomiting or the use of a large stomach tube is indicated.

RELATIVELY NORMAL BLOOD

All patients should have a blood which is relatively normal. The presence of an anemia should be corrected. The major operations require that the hemoglobin be above 11 grams and the red cell count above four million. Sufficient transfusions must be given to attain this level before operation, and additional blood should be available for use at operation or postoperatively.

Hypoproteinemia should be corrected by proper diet, transfusions of blood or plasma.

The prothrombin level should be determined in patients with obstructive jaundice or biliary fistula. If this is down at all, it should be treated. We give Synkamin 1 cubic centimeter daily (parenterally) for three days.

Acid-base disorders, particularly alkalosis in peptic ulcer patients or in intestinal obstruction, should receive attention.

Dehydration is frequent in pyloric obstruction, obstructive lesions of the bowel, and carcinoma of the rectum with diarrhea. These patients require adequate fluid for hydration before operation. In elective cases, the intake can be gauged by an adequate urine output; an output of 1,000 to 1,500 cubic centimeters per twenty-four hours is considered sufficient.

Seriously ill, dehydrated, acute abdominal emergencies require energetic measures to correct fluid depletion. The operation may advantageously be delayed until 2, 4, 6 or 10,000 cubic centimeters of parenteral fluid, normal saline or 5 per cent glucose in distilled water, have been given. The most accurate method of determining the restoration of fluid balance is a proper urinary output. If the kidneys have excreted 300 to 500 cubic centimeters of urine, the patient is ready for emergency operative procedures.

THE USE OF WANGENSTEEN AND MILLER-ABBOTT TUBE SUCTION

Elective Cases: If we feel Wangensteen suction may be indicated, we insert the tube. If there is a possibility of an operative procedure on the gastrointestinal tract, the tube should be inserted and working before operation.

In patients with carcinoma of the stomach or peptic ulcer where gastric resection or gastroenterostomy may be done, the stomach is washed out daily with a large stomach tube for three or four days before operation. A Wangensteen tube is introduced the afternoon before operation, connected up, and allowed to work. The oral intake is stopped and fluids given intravenously.

Jaundiced patients with possible carcinoma of the pancreas or ampulla of Vater have Wangensteen suction started the afternoon or evening before operation.

For carcinoma of the right half of the colon, regional ileitis, and ulcerative colitis, a Miller-Abbott tube is used. The patient can take a clear liquid diet while the tube is going down. When the tube is well down in the small intestine, it is connected up and allowed to function, and the patient is operated upon the next day.

In patients with carcinoma of the rectum and left half of the colon, a Wangensteen tube is introduced the day before operation and allowed to work. A Miller-Abbott tube might be preferable here, but we have experienced such difficulties in passing them that we have adopted the Wangensteen tube for these cases to avoid unnecessary delay, and they have proved satisfactory.

Patients for splenectomy have a Wangensteen tube passed the day before operation. This decompresses the stomach, allowing better operative exposure, and prevents postoperative gastric dilatation.

In patients admitted with generalized peritonitis, we use either the Miller-Abbott or Wangensteen tube, whichever will properly decompress the intestine. The Wangensteen tube is satisfactory in about 80 per cent of the cases. The tube should be left down until the patient is recovering from the peritonitis, usually seven to ten days. We do not hesitate to leave it down longer. It is always open, giving continuous suction.

Emergency Cases: With small bowel obstruction, the Wangensteen tube is passed and suction established as soon as possible. One may relieve much of the distention while the workup is being completed and the patient is being hydrated. The Miller-Abbott tube is theoretically preferable in these cases, but we do not like to wait the length of time which may be required to get it down and functioning properly.

Patients with perforated peptic ulcer or traumatic injuries of the abdomen, particularly gunshot or stab wounds in which there is or one might expect a peritonitis, should have Wangensteen suction started before they are taken to the operating room.

USE OF CATHETERS

In elective cases the patients should void before going to the operating room. If they cannot void, it is best to catheterize them. For pelvic surgery, such as abdominoperineal resection, an indwelling

catheter is put in the night before operation and connected to intermittent irrigation.

For all emergency laparotomies, the patients should be catheterized if they cannot void before the operation.

USE OF DRUGS AND MEDICATIONS

We use few drugs preoperatively. Other than as a preoperative medication, morphine is used infrequently before operation. We do not give morphine for acute abdominal emergencies until a diagnosis is established and the course of treatment determined.

Barbiturates, especially nembutal, may be given at bedtime to promote sleep and rest.

Digitalis is used in full therapeutic doses for those patients in congestive failure who are being prepared for a rather urgent operation.

Mineral oil is used routinely for the average patient to keep the bowels regulated. Cascara may be given if something stronger is required. Cathartics should not be given if an acute condition within the abdomen is suspected. In preparation for colon surgery most patients receive large doses of mineral oil, two to four ounces, once or twice daily, for four or five days before operation. Usually one-half to one ounce of castor oil is given two days before operation. Castor oil should not be given less than twenty-four hours before operative procedures.

Patients who have had barium by mouth or enema for x-ray study should have this well cleaned out before operation.

The use of enemas can well be discussed at this point. The soapsuds enema is most commonly used. In elective cases, an enema is given early in the morning on the day of operation. This cleans out the colon and aids in the prevention of distention and gas pains postoperatively. For colon and rectal surgery, enemas are given on the morning of operation until the returns are clear. The bowel must be well cleaned out and decompressed.

We do not give enemas to patient before operation in emergency cases.

LOCAL PREPARATION

Our abdominal preparation includes shaving the abdomen from the nipple line well down on the thighs, and, of course, the pubic area. The perineum is also shaved for abdominoperineal resections. We use the dry shave method.

In elective cases the patients are shaved the night before operation. For emergency cases the shaving is done as soon as the patient is worked up while the other preparations are being carried out.

We feel that the most important part of the local preparation is done just before the patient is wheeled into the operating room. A nurse cleanses the abdomen with soap, water, alcohol, and then ether. Special emphasis is directed at the navel and deep folds of fat. This renders the skin mechanically clean. A sterile towel is then placed over the abdomen. After the patient is anesthetized, the operative field is painted with two coats of some solution such as merthiolate, mercresin or Novak's solution. We usually use the latter because it is satisfactory and inexpensive.

THE FLUID REQUIREMENTS OF ABDOMINAL SURGICAL CASES

EDWARD L. BESSER, M.D.

Textbooks and most articles on this subject present certain tenets concerning fluid requirements. In general, these are as follows:

a. An ideal urine output is 1,500 cubic centimeters in 24 hours with a specific gravity of 1.015. Therefore, 1,500 cubic centimeters should be given for urine output.

b. An average of 2,000 cubic centimeters is lost by water of vaporization. This is lost from the skin and through the lungs. Therefore, 2,000 cubic centimeters should be given for water of vaporization.

c. Approximate replacement should be made of fluid lost in vomitus, Wangensteen suction, blood, feces, drainage of biliary or intestinal fistulae.

d. The average, normal daily salt requirement is 6.0 to 8.0 grams. Thus 600 to 800 cubic centimeters of normal saline should be given, and the remainder of the fluid requirement should be given as 5 per cent glucose in distilled water. Fluid replacement of vomitus, Wangensteen suction, drainage of biliary or intestinal fistulae should be given as normal saline.

On the basis of these tenets, let us compute the fluid requirements of a patient who has had a cholecystectomy. Let us further assume that Wangensteen suction had been instituted to treat or prevent distention. If the patient is given no water by mouth or only one ounce an hour, he will lose about 600 to 800 cubic centimeters of fluid through the suction tube in twenty-four hours. This is an average, and in an individual case could be accurately measured. On the basis of the tenets cited above, our calculations would then be:

1,500 cc. for urine
2,000 cc. for vaporization
800 cc. lost through Wangensteen suction

4,300 cc.

The salt requirement— 800 cc. normal loss
800 cc. Wangensteen

1,600 cc. normal saline needed
+ 2,700 cc. 5 per cent glucose

4,300 cc.

If this patient were being treated at the University Hospitals and were not dehydrated prior to operation, we would not give the patient this much fluid. It is our clinical impression that the average patient does not lose 2,000 cubic centimeters by water of vaporization on a day with average temperature and humidity. Thus, we deviate slightly from the tenets which are generally accepted in the literature. We would give this patient a total of 3,200 cubic centimeters, of which 1,600 cubic centimeters would be normal saline and 1,600 cubic centimeters 5 per cent glucose in distilled water. Eight hundred cubic centimeters of each solution would be given in the morning and repeated in the evening. We do not deviate from the established tenets concerning the salt requirement, but we give less glucose in distilled water and thus less total fluids. Experience has taught us that if a patient is not dehydrated before operation, a daily intake of approximately 3,000 cubic centimeters is adequate in the postoperative course. At the University Hospitals, the intravenous fluids are prepared in bottles, each containing 800 cubic centimeters of normal saline or 5 per cent glucose in distilled water. Thus, it is convenient for nurses and interns to give one bottle of each in the morning and in the evening. The majority of our patients are not dehydrated when operated upon, and most of them receive fluids in these amounts. Their daily urinary output will usually vary between 1,000 and 2,000 cubic centimeters. We follow the urine output carefully. One does not need to worry about the patient whose output is above 1,000 cubic centimeters. If the daily output is less than this on two consecutive days, we would then give 4,000 or 5,000 cubic centimeters in the next twenty-four hours. In the uncomplicated case this is rarely necessary. The amount of water lost by vaporization is increased on hot days and in cases of hypermetabolism. This may amount to between 2,000 and 4,000 cubic centimeters and must be estimated.

The rate of administration of intravenous fluids in a normal individual should be 8 to 10 cubic centimeters per minute. Thus, 1,600 cubic centimeters should be given over a period of two and one-half to three hours. During this time, the patient must lie more or less in one position with his arm secured in some manner. This is another reason for not giving more intravenous fluids than is necessary; that is, the longer the patient is forced to lie still because of the intravenous administration, the more danger of pulmonary complications.

I wish to emphasize that our hypothetical cholecystectomy patient, who has a Wangensteen suction, would have an order to receive only one ounce of water each hour, perhaps nothing by mouth, or only ice chips. It is well known that one of the dangers of Wangensteen suction is that the patient may be allowed to drink large amounts of water and thus wash out the gastric secretions and their constituent sodium and chloride ions. The patient will complain of thirst and dryness of the mouth, and this can be alleviated by frequent mouth washes and by having the nurse swab the oral cavity with mineral oil. A finesse is mineral oil flavored with peppermint.

Let us remember that we have been considering the fluid requirements of an average abdominal case without a fistula and one who was not previously dehydrated. If the patient were losing fluids through a fistula, in addition to the 3,200 cubic centimeters as calculated, we would give normal saline equal in amount to the intestinal contents lost through the fistula.

Fluid Requirements of a Patient Who Is Dehydrated

Let us briefly review the mechanism of dehydration in abdominal cases. A classic example is found in the patient with pyloric obstruction. The predominate ion to be lost in this condition is chloride which is lost as hydrochloric acid in the vomitus. The sodium formerly combined with the chloride is left behind to form bicarbonate with carbon dioxide. The result is bicarbonate excess or alkalosis. Of course, water is lost, and if this process continues, the patient eventually reaches a state of marked dehydration, alkalosis and salt depletion. We may correct both the dehydration and alkalosis by the administration of normal saline. How much should we give in an individual case? There have been many formulae devised to determine this, and most of them are complicated. The simplest chemical determination is that of serum chlorides. A widely used formula is one suggested by Coller and Maddock, who reported that "for each 100 milligrams that the serum chloride level needs to be raised to reach the normal (560 milligrams per cent), give 0.5 gram of sodium chloride per kilogram of body weight." This has its limitations, but in cases of pyloric obstruction it works very well. Let us assume we have a patient who weighs 70 kilograms and the serum chlorides are 360 milligrams per cent. This is 200 milligrams below normal; therefore, 1.0 gram per kilogram or 7.0 grams of salt is needed. This would be equivalent to about 7 liters of normal saline. Practically, one finds that a patient with definite dehydration will need between 4 and 8 liters of normal saline to correct the situation. We usually give 1 or 2 liters of 5 per cent glucose in distilled water after the salt depletion has been corrected.

The situation is somewhat different in obstruction of the small intestine. Under these circumstances, chlorides are lost in the vomitus as hydrochloric acid from the gastric juice, but a large amount of sodium is also lost. Sodium is a predominate ionic component of bile, pancreatic and duodenal secretions. The body is able to compensate to a certain degree for chloride loss by the substitution of bicarbonations, but the body is not able to substitute for sodium. Therefore, the chloride determination does not reflect the extent of dehydration in cases of intestinal obstruction as accurately as in the cases of pyloric stenosis. For instance, a patient may have rather marked dehydration and the serum chloride level will be 500 milligrams per cent. Determination of the serum sodium level would give us a more accurate determination of the extent of dehydration, but this is a difficult laboratory procedure.

When laboratory facilities are not available, one may estimate the dehydration by the clinical appearance, the specific gravity of the urine, and the hematocrit or red blood cell count. Empirically, it has been found that 4 to 8 liters of saline are needed to correct dehydration and we usually give 3 or 4 liters of saline to our patients with intestinal obstruction and then alternate saline with 5 per cent glucose. We prefer not to operate on these patients until they have voided, or until the catheterized specimen shows a specific gravity of 1.015 or less.

PARENTERAL FLUIDS FOR PATIENTS WITH CARDIAC DISEASE

Intravenous fluids should be given with great care to these patients. Each case is individual, of course, but the generalities are that the rate should be slow—allow two or two and one-half hours for 800 cubic centimeters. The amount of salt given should not exceed the minimal requirements. When there is obvious cardiac failure, intravenous fluids should not be given. Subcutaneous infusions or even fluids per rectum should be substituted.

INTRAVENOUS FLUIDS IN CASES OF HYPOPROTEINEMIA

The serum proteins largely maintain the osmotic pressure of the serum. When these are lowered, the vascular system will not adequately retain water or electrolytes. These materials simply exude into the tissues and produce edema. The danger of giving electrolytes intravenously is then obvious. Replacement of the proteins by plasma transfusions or whole blood transfusions is the quickest means of correcting hypoproteinemia. If electrolytes are given, they should be accompanied by plasma or blood.

INTRAVENOUS FLUIDS IN CASES OF KIDNEY DISEASE

These patients cannot concentrate their urine and cannot excrete abnormal amounts of sodium chloride. Therefore, the minimum amount of saline should be given and larger amounts of 5 per cent glucose in distilled water are given. There are no rules of the thumb for these cases.

A GENERAL DISCUSSION OF SOME ASPECTS OF POSTOPERATIVE CARE

ROBERT T. TIDRICK, M.D.

First, for consideration, is the immediate postoperative period. It is the surgeon's responsibility to see that the patient is delivered safely to the care of the nurse who will be in constant attendance. The patient should be transported from the operating room to the postoperative room in the company of a member of the operating team; it minimizes the chances of difficulty incident to obstruction of airway during this critical period. A member of the team accompanying the subject should superintend the patient's position in bed and the immediate administration of fluids, oxygen, or other agents dictated by the patient's condition.

The postoperative orders should be in writing, leaving nothing to guesswork. They should not attempt to cover in anticipation the entire postoperative period. They should be written in some logical order to avoid the likelihood of serious omission.

Specific orders are written regarding the position the patient is to assume in bed. As a general rule, the patient should lie flat with the head and neck in a position of extension. There is an increasing tendency to have the foot of the bed elevated to some extent for a few hours, thus facilitating bronchial and tracheal drainage and combatting the tendency to shock.

Specific directions should be made regarding the periodic turning of the patient. The patient should be completely turned from back to one side or the other (alternating sides) not less often than every two hours. At this time, directions should be left to encourage active, deep, forced respiration each time the patient is turned. The patients are required to breathe a minimum of ten deep breaths at each time under supervision of the nurse. This is probably of more aid in the prevention of atelectasis than the use of carbon dioxide and does not possess its disadvantages.

The specific directions for postoperative analgesia and sedation are then written. Conservatism

in the giving of opiates in the "p.r.n." manner is justifiable, and the additional "nuisance calls" to see the patient are more than offset by decreasing the incidence of postoperative atelectasis and other complications. Morphine is given sparingly in doses not exceeding 1/6 of a grain in average patients and not oftener than every four hours. The attempt is made, when possible, to relieve pain by the simplest measure feasible, and determine first whether there is a remedial discomfort, such as a distended bladder, a disorderly bed, a tight cast or an ill-adjusted dressing.

Codeine plays little part in the postoperative care of abdominal surgical patients. In the past few years the barbiturates have played a less prominent rôle in postoperative care than formerly. The danger of mental aberration, particularly in the aged patient and with short-acting barbiturates, must not be forgotten.

The medium long-acting barbiturates, such as phenobarbital in reasonable dosage, may be of value in treating sleeplessness and restlessness during the later postoperative course. Paraldehyde, chloral hydrate and bromides are rarely used in abdominal surgery.

In general, there is little cause to worry about starvation in the patient who has had a major operation and who has previously been in a good nutritional state. The upsets incident to trying to force food into an unwilling and unprepared gastro-intestinal tract for the first few days following a laparotomy more than offset a few days on a negative caloric balance. Particularly do some articles ordinarily included in a liquid diet, such as the highy sugared fruit juices, appear to engender distention, nausea and vomiting. The policy is to keep the laparotomy patient on a light liquid diet to full liquid diet for three days and then change to a soft diet, and from a soft to a general hospital diet in about six days. A different situation exists if the patient is chronically debilitated. Then an attempt is made to resume a high-caloric, high-vitamin intake as soon as reasonably possible. It must be emphasized that the patient who is subject to chronic accelerated protein loss should have a diet high in protein.

Attention in recent years has been focused on vitamin therapy. The judicious use of the highly purified vitamins in the chronically debilitated patient may be reflected in improvement in a general way in the welfare of the patient.

Vitamin C has received considerable attention in surgical circles. It will not prevent evisceration or slow wound healing if other factors, particularly hypoproteinemia, are disregarded. Perhaps in this institution it has played a less noteworthy part in recent years in lowering the incidence of evisceration than the use of nonreactive stainless steel wire.

Vitamin K administration is always indicated in the jaundiced patient.

In general, dramatic results from vitamin therapy are not seen, except in the occasional patient in whom a specific deficiency exists. In the patient whose convalescence is brief and whose previous diet has been normal, no attempt to give additional vitamin supplements is usually made.

Having specifically outlined the general orders to be followed, the surgeon's responsibility then is to be continually watchful for complications. The patient is seen at definite times during each twenty-four-hour period by members of the intern and resident group, and the temperature, pulse, and respiration graphic record studied. Alert nursing care plays a most important part in the early detection of complications.

In the general surgical patient, a sudden rise in temperature, pulse rate, and respiratory rate during the first forty-eight hours should make the surgeon think first of a respiratory complication. Atelectasis is the most common. Its presence is usually not difficult to ascertain if a reasonably careful examination of the chest is made. It may often be treated by relatively simple measures. Re-aeration may be effected in a cooperative patient by slapping the chest wall at the end of deep, forced expiration. The patient is then made to cough. This procedure is repeated several times, and then the area examined again by percussion and auscultation. The improvement is occasionally dramatic. If this measure fails, one should then consider bronchoscopy. This procedure is probably not utilized frequently enough, because by bronchoscopic aspiration, thick tenacious plugs may be removed which otherwise do not yield to treatment. The patient with untreated atelectasis is a possible and not infrequent victim of secondary pneumonitis and its train of sequelae.

Pneumonia occurs somewhat less frequently than atelectasis postoperatively. On many occasions when it does, it is but a minor part of an overwhelming series of postoperative calamities which terminate in death. It may be difficult to evaluate in these whether the patient is dying of pneumonia or has pneumonia because he is dying. But, when it exists and appears to be the ringleader of complications, its treatment should be prompt and vigorous. The sputum is examined for the causative organisms, but in recent months the treatment has been almost entirely by chemotherapy. Intravenous sodium sulfathiazole is given to the extremely ill patient in whom parenteral administration is indicated. Sulfadiazine is infrequently used here, and sulfapyridine less fre-

quently than formerly. The combined use of antipneumococcic serum, in applicable cases, with chemotherapy is occasionally employed.

Frequent turning, frequent, forced deep breathing, encouragement to cough and bring up respiratory tract exudate, and avoidance of overly restrictive dressing and rib-restricting abdominal binders —these elements of careful nursing and surgical care all play a large part in the prevention of pneumonia. Particularly is this true if the patient's cough reflex is not depressed by over-use of opiates. The patient who has developed pneumonia must be closely watched for the signs and symptoms of empyema.

Abdominal distention may appear at any time postoperatively, but is particularly likely to appear early after intraperitoneal manipulation, and is especially prone to occur after procedures in the upper abdomen. Distention may be due to peritonitis or due to the development of intestinal obstruction. It is important to ascertain its cause. If it is an ileus not on the basis of peritonitis, it may range from a simple thing easily relieved to gastric dilatation or paralytic ileus, which, if not promptly relieved, may cost the life of the patient.

If the distention is due to peritonitis, continuous suction should be employed, and no attempt should be made to activate peristalsis, thus defeating its protective nature. Enemas in such cases are futile.

If one has determined that the ileus is not on the basis of a peritoneal infection, the treatment may be classified in three general groups: by tube, by drug, and by enema. Some combination of the first two is commonly employed. By all odds, the most important is the employment of the continuous Wangensteen suction, whereby a small caliber tube is introduced through the nose and down through the pylorus into the duodenum. This is easy to introduce, takes a minimum of delay and equipment, and is ordinarily efficacious. The long, double-barreled Miller-Abbott tube is useful in some instances, particularly if it has been put in preoperatively, but is difficult to insert if peristalsis is diminished or absent. It may be employed simultaneously with the Wangensteen tube.

Rectal tubes play a little useful rôle, and should not be expected to accomplish more than a minor auxiliary part. They should be used when peristalsis stimulating drugs are employed.

Of the drugs, morphine is most commonly used here. It is given usually in 1/6 grain dosage, and heat, generally in the form of a heat cradle with two light bulbs, is applied over the abdomen. The morphine is thought to cause an increase in small bowel tone and seems to be of aid in many cases.

Pituitrin is given with variable results, and, in general, seems to be unpredictable. Prostigmine is used more often here than pituitrin, and likewise with rather unpredictable results. Dr. Wollmann of this Department conducted a controlled study on its use as a prophylactic agent against distention, and found it to be of no significant aid. It should be tried in the severe case of ileus, for it has occasionally been useful. Hypertonic saline and spinal anesthesia have been used on rare occasions in attempts to treat severe paralytic ileus. Results are usually equivocal.

Enemas are useful when the distention affects the large bowel, particularly the left side. In general, their usefulness is limited. They should not be given in the postappendectomy patient because of danger of blowing out the stump; likewise, they should not be given on subjects who have had any recent procedure on the large bowel. There is little to recommend the various irritants which are sometimes put in the enema; and they may do harm.

Wound infection in a previously clean wound is usually not manifested earlier than the third or fourth day, unless one is dealing with an infection due to an organism of the gas-forming group. Once there is reason to suspect the wound, it should be watched carefully for suppuration and abscess formation. Early complete drainage is to be desired, usually meaning that the wound will require complete laying open, at least down to the deep fascia. Cultures are often indicated for the intelligent treatment of the infected wound. Drugs of the sulfonamide group play an important part in abdominal surgery in the treatment of general infections and local wound infections, but their availability nowise relaxes the indication for use of sound surgical principles in preventing wound infection. Likewise, in the local care of the wound, they do not supplant proper drainage of pus or those general and local measures which have long been found efficacious in combatting and localizing infection. They may be employed locally with some success.

What relationship exists between frequency of wound dressing postoperatively and incidence of infection? It is difficult to evaluate, but in general there is increasing conservatism, the tendency now being to dress clean wounds the minimal number of times necessary for removal of sutures or drains; never for the sake of idle curiosity alone.

During the latter portion of the postoperative period, the complications incident to thrombosis appear. Phlebothrombosis or non-infectious venous thrombosis and thrombophlebitis generally appear on the tenth day or later, and are prone to occur in the patient whose condition has necessitated absolute bed rest. These complications are

best avoided by systematic daily active and passive motion of the patients' extremities, as well as frequent turning and shifting of position. Because of the frequency of thrombosis in patients with varicose veins, preliminary saphenous ligation is often done a few days before an elective major operation.

The local treatment (heat or cold) of the area of phlebothrombosis is probably of little importance. The main concern is to avoid its spreading. It has been a recent practice on this service, in patients showing an early phlebothrombosis of the superficial veins of the leg or thigh, and in those in whom the deep circulation is patent, to perform a high saphenous ligation at once. The patient is then encouraged to use the extremities as much as the general condition permits. This treatment has so far appeared encouraging. In those in whom deep venous thrombosis exists, this latter treatment is not usually considered possible, and the use of anticoagulant therapy is indicated. Heparin, by continuous intravenous administration, has been employed here in the past two years with some good results, although it is expensive and somewhat tricky to administer. Encouraging results in the prevention of intravascular thrombosis, from the oral use of dicoumarin, have been reported recently. It promises to be less expensive and easier to administer, although slow in initial action and not free of some danger. Our experience with the use of the novocain paravertebral sympathetic block has been limited.

When should the patient be allowed to get up? There is a general tendency in this Surgery Department to get the patients out of bed sooner than in former years. This is in part due to the use of stainless steel wire in the majority of the operative wounds, with its lessening of foreign body reaction and possible permitting of earlier healing. In general, one attempts to achieve a proper balance between two worthy principles: on the one hand, the principle of rest in aiding wound healing and recovery from operative trauma, and on the other, the avoidance of unnecessary bed residence with increased tendency to phlebothrombosis, pulmonary complication, and pressure sores.

MEETING OF THE IOWA ANESTHESIOLOGICAL SOCIETY

Dr. Ralph M. Waters, Professor of Anesthesia at the University of Wisconsin Medical School, is to be the chief speaker at the meeting of the Iowa Anesthesiological Society in Des Moines April 30. Following his talk, there will be a round table discussion led by Dr. Waters, Dr. Stuart C. Cullen of Iowa City, and Dr. Florence Johnston of Cedar Rapids.

THE EFFECT OF ACETYLSALICYLIC ACID (ASPIRIN) ON THE GASTRIC MUCOSA

A Gastroscopic Study*†

William D. Paul, M.D.

It is often stated that the ingestion of acetylsalicylic acid causes epigastric distress. This statement is the result of clinical experience only. Some pharmacologists do not agree with this idea, and others evade the issue entirely. Cushny[1] states that "aspirin passes through the stomach unchanged and is free from the gastric effect of salicylic acid." On the other hand, Sollmann[2] writes, "In fact it (aspirin) produces gastric irritation." The texts on clinical medicine do not mention the possibility that acetylsalicylic acid may cause gastric distress. However, Winkelstein[3] says that this drug may inflame the gastric mucosa. Sajous and Hundley[4], in discussing aspirin, state "Many cases were encountered during the great influenza epidemic of 1918-1919 in which severe stomach disturbances followed the use of acetylsalicylic acid, sometimes with actual hematemesis. The drug was taken in the usual doses and intervals, and the disturbances began gradually and grew constantly worse, with sometimes sudden hematemesis; or melena might be the first indication of the gastric hemorrhage."

Despite the statements quoted above, there was no direct evidence to prove that the drug actually caused changes in the gastric mucosa. In 1938, Douthwaite and Lintott[5] studied the effect of aspirin on the gastric mucosa by means of the gastroscope. They concluded that "Acetylsalicylic acid (in the form of aspirin and certain proprietary preparations) is a gastric irritant and may thus cause acute indigestion and hemorrhages or, if taken repeatedly, chronic gastritis." In 1939, Hurst and Lintott[6] reported the case of a man who developed gastric bleeding after taking aspirin. On gastroscopic examination they found areas of hyperemia in the gastric mucosa surrounding particles of aspirin. Their patient had had dyspeptic symptoms for twenty-seven years and bled on several occasions. No evidence of peptic ulcer was found radiographically. He also had migraine, for which he took six tablets of aspirin a week and sometimes as many as six a day. Because of this he was given two tablets of aspirin and then inspected gastroscopically, at which time hyperemia was found. Inasmuch as this patient had a long history of "dyspepsia and bleeding," it is possible that his gastric mucosa was not normal.

*From the Department of Internal Medicine.
†Aided by a grant from the Institute for the Study of Analgesic and Sedative Drugs.

Douthwaite and Lintott examined the gastric mucosa of sixteen persons who were from thirty-one to sixty years of age. They reported a positive reaction, that is, areas of hyperemia of the gastric mucosa surrounding the drug, in thirteen instances, or 81 per cent, and a negative reaction in three, or 19 per cent. One of the sixteen patients showed "apparent" submucosal hemorrhage. They said that the gastric mucosa showed atrophic gastritis in one case, hypertrophic gastritis in eight cases, gastric ulcer in four, and gastrojejunostomy in one; it was normal except for an old scar in one, in two the mucosa was pale, and in only one was the mucosa normal. It is well known that hyperemia, edema, submucosal hemorrhages, superficial ulcerations, and bleeding are common in chronic gastritis. Stomachs which are the seat of benign ulcers also may show submucosal hemorrhages. If we were to eliminate the patients in Douthwaite and Lintott's series who had gastric ulcer or gastritis, only three patients would be left. Of these three, one had a normal mucosa and reacted to aspirin, whereas two had a pale mucosa and only one of these reacted to the drug. Since these results were not conclusive, we decided to reinvestigate the problem.

The technic used by Douthwaite was followed. On the morning of the examination breakfast was withheld. About one-half hour before the patients were sent to the gastroscopic clinic they received 1/8 grain (.008 gram) of codeine and 1/120 grain (.0005 gram) of atropine sulfate. Local anesthesia was obtained by spraying the pharynx. An Ewald tube was introduced into the stomach and the contents aspirated. The patients were then given 15 grains (1.0 gram) of the drug, with one ounce, or less, of water to enable them to swallow the tablets. The gastroscope was then inserted.* Eleven brands of acetylsalicylic acid were used, nine of which were bought on the open market; the other two were hospital aspirin and hospital acetylsalicylic acid compound. Each tablet contained 5 grains (0.33 gram). As a check on the aspirin tablets, a placebo was used.

One group of patients received three tablets before gastroscopy. Later, only two tablets were employed. The second group of patients was known to have benign ulcers and was examined from two to four times. The third group of patients was given 50 to 80 grains (3.25 to 5.33 grams) of acetylsalicylic acid in the twenty-four hour period before examination. The last group of patients comprised those who gave a history of epigastric distress after the ingestion of acetylsalicylic acid and those who had taken the drug over long periods of time. The patients in all the groups were from seventeen to eighty-one years of age.

Before the study was started, the first 700 gastroscopic examinations which were done at the University of Iowa were reviewed in order to ascertain the incidence of chronic nonspecific gastritis. Table I shows the result of this study. There were 243 cases of gastritis, or 34.6 per cent. This compares favorably with the series reported by Schindler[7] and Fitzgibbon and Long[8], and shows that we were neither missing the changes in the gastric mucosa nor seeing more than were actually present.

TABLE I

Chronic Nonspecific Gastritis

	Schindler		Fitzgibbon and Long		Paul	
	Number	Per cent	Number	Per cent	Number	Per cent
Total number of cases	1000		500		700	
Chronic superficial gastritis	110	11.0	57	11.4	96	13.7
Chronic atrophic gastritis	136	13.6	48	9.6	88	12.5
(superficial+atrophic)	(246)	(24.6)	(105)	(21.0)	(184)	(26.2)
Chronic hypertrophic gastritis	172	17.2	80	16.0	59	8.4
Total nonspecific gastritis	418	41.8	185	37.0	243	34.6

Group I included 160 patients who had gastrointestinal symptoms but negative roentgenograms. Also included were 22 patients with proved duodenal ulcer. Table II shows the gastroscopic diagnosis in these patients. Of the 182 patients, 107 were normal, 62 had chronic gastritis, two had a benign ulcer on the lesser curature, two had multiple polypi, and one had carcinoma. Eight of the patients with ulceration of the duodenum showed pigment spots.

TABLE II

Gastroscopic Diagnosis	Incidence
Normal	107
Chronic nonspecific gastritis	
(a) chronic superficial gastritis	41
(b) chronic atrophic gastritis	8
(c) chronic hypertrophic gastritis	13
Pigment spots	8
Gastric Ulcer	2
Gastric Polypi	2
Gastric Carcinoma	1
Total number of cases	182

In 107 patients with a normal mucosa acetylsalicylic acid caused no hyperemia, edema, or hemorrhage. The aspirin tablets were found, as a rule, in or near the mucous lake. This is the dependent part of the stomach, near the cardia. In

*The Cameron-Schindler omniangle flexible gastroscope was used in this study.

some instances the tablets would disintegrate rapidly, but in others they would remain intact during the period of the examination. At times one or two of the tablets could be seen to wander into the pylorus and then disappear. Very often the mucosa beneath and around the tablet was darker in color than the rest of the mucosa. This was thought at first to be hyperemia, but, whenever a peristaltic wave changed the position of the tablet, the mucosa of the original site was always normal. This dark area apparently represented the shadow cast by the drug. When placebo tablets of the same size were used, this dark area was also noted. In none of these patients could we demonstrate any changes caused by the drug.

In the cases of gastritis it was difficult to decide whether or not the changes in the mucosa were the result of action of the drug. Many of these patients showed pigment spots, submucosal hemorrhages, or changes in the color of the mucosa. In these subjects it was necessary to watch the drug move about with the peristaltic waves. At times the tablet would rest on or near a pigment spot or area of hemorrhage, but when it moved to a new area where the mucosa was normal, no new hemorrhages or change in color appeared. To be more certain of our observations, at least ten of these stomachs were re-examined within three to seven days. At this time no drug was given and the same changes were still present. One patient with atrophic gastritis had two pigment spots near the antrum, along the greater curvature. One of the aspirin tablets lodged on the pigment spot and did not move, although it was watched for a period of fifteen minutes. We were unable to decide whether the pigment spot was the result of drug action, or whether the tablet happened to lodge at that spot. This patient was re-examined within forty-eight hours, and the two pigment spots previously seen were still present.

In group II there were twenty-seven patients with a benign ulcer on the lesser curvature. These patients were examined gastroscopically two or more times. Nineteen of them had changes in the gastric mucosa, either localized around the lesion or generalized in the stomach. These changes consisted of edema, changes in the color of the mucosa, adherent mucus, or hemorrhages in the mucosa. Of the eight patients with no evidence of gastritis on the original examination, five were given tablets. These patients showed no changes which could be attributed to the acetylsalicylic acid. The other three were given aspirin during subsequent examinations, with negative results. Of the nineteen who showed gastritis, thirteen received no aspirin on the first examination, and six did. Again the results were negative. The thirteen were re-examined later after taking the drug, and there were no positive reactions. The following patient demonstrates the results of this group: This man had a benign ulcer on the lesser curvature near the angulus, with considerable edema and submucosal hemorrhages near the ulcer. No drug was given. Two weeks later he was again examined gastroscopically without being given the drug. The ulcer was smaller, but the gastritis was still present. Three months later roentgenograms failed to reveal the ulcer; and gastroscopy was performed after the ingestion of aspirin. The ulcer was practically healed and there was no evidence of gastritis. The mucosa was of normal color, although the aspirin tablets disintegrated and particles of the drug were scattered throughout the stomach.

The third group of patients was comprised of twelve persons who had a vague history of dyspepsia or distress and negative laboratory findings. Most of these people were regarded as psychoneurotic. They were given 50 to 80 grains (3.25 to 5.33 grams) of hospital acetylsalicylic acid during the twenty-four hour period preceding the gastroscopic examination. The last dose was administered about one hour before the patient was sent to the gastroscopic clinic. All of these patients showed a normal gastric mucosa and there was no evidence of change in color or hyperemia. One woman in this group, who was fifty-nine years of age, entered the hospital because of recent vague distress below the xiphoid cartilage. This distress was not related to meals. There was no history of previous dyspepsia, melena, or vomiting. Physical examination was essentially negative and laboratory study, including roentgenologic examination of the gastro-intestinal tract, showed nothing abnormal. Unfortunately, no electrocardiogram was obtained. She was given 80 grains (5.33 grams) of acetylsalicylic acid during the twenty-four-hour period preceding gastroscopic examination; the last dose, 15 grains, (1.0 grams) was given one and a half hours before she was examined. The gastroscope was introduced with ease, and the gastric mucosa was readily visualized. Nothing abnormal was noted; the color of the mucosa was described as orange-red. Fifty minutes after the completion of the endoscopic examination she had a severe pain in the epigastrium, became markedly cyanotic, and expired within a few minutes. A postmortem examination was performed one hour after death, or one hour and fifty minutes after the gastroscopic procedure. The cause of death was coronary occlusion. The gastric mucosa was carefully

studied, and no macro- or microscopic evidence of gastritis was found.

The last group of patients was comprised of nine subjects, two of whom had a history of epigastric distress after the ingestion of aspirin. Both of these patients were examined gastroscopically after they had swallowed 15 grains (1.0 gram) of acetylsalicylic acid, and neither showed any reaction to the drug. Seven patients gave a story of taking acetylsalicylic acid for many years. The drug was taken to relieve migraine, backache, and arthritis. Roentgenologic examination of the stomach and duodenum in these cases showed no evidence of disease. Only one subject showed a mild superficial gastritis at the time of gastroscopic examination. Gastroscopy was again performed within three days, at which time he was not given aspirin. The superficial gastritis was still present, again showing that the presence of the gastritis was coincidental.

If acetylsalicylic acid does not cause hyperemia of the gastric mucosa, it is necessary to explain the epigastric distress in some other way. Smith and [9 and 10] found that pylorospasm, increased intragastric pressure, and active peristalsis were responsible for the distress which occurs with chronic appendicitis, irritability of the bowel, and peptic ulcer. It is possible that aspirin may cause epigastric distress by initiating pylorospasm. Ivy and his coworkers[11] demonstrated that one to two grams of acetylsalicylic acid caused gastric retention and also increased the titratable acidity of the stomach contents. This has been substantiated in our laboratory and will be reported later.

CONCLUSIONS

1. Acetylsalicylic acid does not produce hyperemia or cause hemorrhages in the gastric mucosa.

2. Acetylsalicylic acid in doses as high as 80 grains per day does not cause any gastroscopically demonstrable changes in the stomach.

3. The ingestion of acetylsalicylic acid over long periods of time does not produce chronic gastritis.

4. The epigastric distress which sometimes occurs after the ingestion of acetylsalicylic acid might be the result of increased acid production and pylorospasm.

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VISIBLE CONGENITAL MALDEVELOPMENTS OF NEUROSURGICAL CHARACTER ABOUT THE HEAD AND SPINE*

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There are a number of congenital defects about the head and spinal axis which are present at birth or in early infancy. They occur just seldom enough that the general practitioner is not ordinarily primed concerning their diagnosis and management. And yet many of these lesions are by nature the cause of great concern to parents and physician.

Obviously, all types of visible congenital lesions are not included here. Also, the dermoids and teratomas presented are not neurosurgical; they have been included because they are sometimes mistaken for encephaloceles and meningoceles, and it is for this reason that these patients were treated on the neurosurgical service. It is felt that by grouping the cases in this way the discussion will prove more instructive.

SPINA BIFIDA

This failure in complete development occurs about once in every 500 to 800 births and may exist with or without a protruding meningeal cyst (meningocele). Several theories have been proposed to explain the cause of the defect but they are without confirmation. A fair understanding of the mechanism of these defects can be had from a brief consideration of embryology. In early embryonic life the spinal cord (which is derived from the epiblast) appears as a groove. This groove develops into a tube which separates from the skin. The separation is occasioned by an ingrowth between cord and skin of mesoblastic structures (meninges, muscle and bone). The laminal arches of the vertebrae appear at the second month and in another month completely cover the cord.

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This development is completed first in the dorsal spine, next in the cervical, and last in the lumbar spine. If this development is incomplete, a bifid spine will result. The severity of the defect will depend upon the time in fetal life that development begins to fail and to the degree of failure. If closure of the spine fails throughout its entire length and such failure begins early in embryonic life, the maldeveloped spinal cord will be visible at birth in an open spinal canal. The defect is termed rachischisis and is often associated with anencephalia.

Partial rachischisis is a less extensive defect occurring usually in the lumbar region. There is an obvious bifid defect in the spine in the center of which an area of weeping, granulating tissue is present. This tissue is undeveloped spinal cord which was never separated from the skin or covered by skin and there appears to be no tendency for surrounding epithelium to grow over it after birth. This area is surrounded by thin bluish epithelium. The defect may be flat or protruded like a meningocele (Figure 1.) In either case, structures below the level of the defect are usually devoid of function. Hence there is usually paralysis of the lower extremities, clubbing of the feet, and poor tone of bladder and anal sphincters. The rectum is usually prolapsed to some extent. Surgical repair is contraindicated, because even if one could remedy the neurologic defect, which is impossible, infection and meningitis would be almost inevitable because of the unclean, granulating surface.



Fig. 1. Partial rachischisis with meningocele. The strip between the arrows presented a weeping, granulating surface which consisted of cord tissue. Surgery is contraindicated.



Fig. 2. A cervical meningocele in an infant 4 months of age. The sac contained no nerve tissue and the baby otherwise appeared normal. The repair was satisfactory and the result good.

SPINA BIFIDA WITH MENINGOCELE

In this case the meningocele is the important consideration from a surgical standpoint because it is the meningocele and not the bifid spine which is repaired. They may exist anywhere from cervical spine to sacrum, although the majority are located at the lumbar or lumbosacral region. In size they range from that of a walnut to almost the size of the child itself. The usual size is about that of an orange.

Simple Meningocele: The meningocele in this case is a sac containing cerebrospinal fluid and encased by normal skin, dura and arachnoid. The neck which leads to the dura in the spinal canal is small and the defect in the spine is usually small. (Occasionally the neck will become occluded and the meningocele will undergo spontaneous fibrosis.) The sac contains no nerve tissue. Such a meningocele is seldom associated with hydrocephalus or other neurologic deformity (Figure 2). It is repaired by making an elliptic incision in the sagittal or transverse plane. Dissection is carried to the dura and the neck of the sac followed to the normal intraspinal dura, cleaning away all adherent tissue. Then, with the infant's head lowered, the sac is opened. When it is evident that the sac contains no nerve or spinal cord, the neck

is ligated, severed and allowed to drop freely into the spinal canal. If there is a significant defect in the spine, the aponeurosis of the erector spinae muscles may be approximated with a few silk sutures. It may be necessary to make an elliptic incision in the aponeurosis and fold the two leaves over the defect. The repair of this type of meningocele is simple but should be done thoroughly. The repair should be devoid of complications and hydrocephalus does not often supervene. (See discussion under Further Considerations in the Surgery of Spina Bifida and Meningocele.)

Myelomeningocele: This type of meningocele occurs in about 75 per cent of the cases of spina bifida (Figure 3). It occurs most commonly in the lumbar region, infrequently in the dorsal, and rarely in the cervical region. The sac has a wider



Fig. 3. Lumbosacral myelomeningocele in a child 10 months of age. The rectal and bladder sphincters were paralyzed but the lower extremities only partially so. She was able to stand with support eighteen months after a successful repair.

base and larger neck than the simple meningocele. It may be encased completely by dura and arachnoid or the dura may be defective and exist only around the base of the sac. The skin over the sac may be of normal thickness or bluish and quite thin, especially over the top. The sac contains nerves or part of the spinal cord or both. When the sac is opened the nerves may be seen arching or arborizing in the cavity, some of them becoming lost in the wall of the sac. It is not uncommon to find the terminal end of the cord or conus medullaris in the sac.

The degree of functional impairment varies with the location of the meningocele and with the severity of the defect. In spite of the fact that the sac contains nerve tissue, there may be very little functional impairment. On the other hand, there may be paralysis of the lower extremities, clubbing of the feet, and absence of bladder and rectal sphincter tone. There may be a complete defect in the cord at the lumbosacral region with loss of sphincter tone and yet with preservation of considerable function of the lower extremities due to intact innervation from the upper lumbar nerves. (It should be remembered that the conus medullaris in the infant may be as low as the first sacral spinal segment. It migrates upward with growth to rest at about the level of the first lumbar vertebra.) Hydrocephalus may or may not be associated with this type of meningocele. When present, it is due to other malformations or causes given in the discussion on Hydrocephalus.

This type of meningocele is repaired by making an elliptic incision as described under Simple Meningocele. When the neck of the sac has been dissected free, the sac is opened. Any cord structure should by all means be preserved. One will occasionally see the anterior half of the dural canal over which the spinal arches failed to close. The posterior aspect of the dural canal is the dura of the meningocele itself. One can see the anterior roots of the cauda equina disappearing into their respective dural foramina out of harm's way. The rootlets arborizing in the sac are practically always sensory. Those which can be seen to enter and emerge from the sac intact should be preserved, but one need not hesitate to sacrifice those filaments which become lost in the sac. When dealing with the type just described, all one can do is allow the cord to fall into the half shell canal, trim the sac, suture the dura over it loosely, and then if feasible mobilize the aponeurosis of the erector spinae muscle to be sutured over the dura. The cord should not be compressed or constricted.

There is a type of spina bifida which might well be included here although it may not be associated with a meningocele. Externally, the lesion appears to be a fatty mass covered by normal skin and usually with a dimple. Often a flat, port wine nevus is present. This type is always at the lumbosacral or sacral region and unassociated with complete paralysis of the lower extremities, although the sphincter tone is usually impaired. When the mass is dissected, one finds that the sacral canal has failed to develop. The end of the spinal cord is outside of the spine and is continuous with tough, fibrous tissue which is in turn continuous with the fatty tissue. There occasionally may be a small, poorly developed meningocele sac around the end of the cord. One can do only further damage to such a defect and when disclosed the wound should be closed.

Syringomyelocele: This is a rare type in which a collection of fluid in the central canal of the cord balloons the latter out so that when one opens into the meningocele he goes through skin, meninges, and a much thinned out layer of cord. The center of this sac is the central canal of the cord, and hence will be devoid of arborizing nerves. The latter will have been pressed between

the thin layer of cord and the meninges. No such cases have come to our attention.

FURTHER CONSIDERATIONS IN THE SURGERY OF SPINA BIFIDA AND MENINGOCELE

I feel it is best to pospone the repair of a meningocele until the infant is four or five months of age. The surgery is not ordinarily severe and loss of blood can be kept at a minimum with care, but infants a few months of age can tolerate the operation much better than when a few days or weeks of age. If the skin over the sac is so thin that rupture may occur, it is repaired without delay. In the event that rupture does occur, the family physician is advised to paint the meningocele with 2 per cent gentian violet and apply a dressing. The meningocele is then repaired at the earliest possible moment.

When confronted with a meningocele associated with complete paralysis of the lower extremities, and knowing that any chances of improving the paralysis are very small, one might debate whether the operation should be done. It has been my experience that after the nature of the situation has been explained to the parents, they have always been insistent that the repair be made, and I have always been agreeable to it. If hydrocephalus coexists with a meningocele, repair of the latter is much more futile. Hydrocephalus may develop following the repair of a meningocele (particularly a myelomeningocele), but when already present it is certainly not improved by the repair. The treatment of hydrocephalus is at best very unsatisfactory, but when the parents insist I have recently made attempts to treat it before repairing the meningocele.

When one repairs a meningocele in infancy, he does not count on improving the neurologic defects such as paralysis. The repair is made to prevent future spontaneous rupture, to remove the unsightly and inconvenient mass, and to free the cord from any encumbrance to its migration up the spinal canal as the child grows. The attachments of the nerves and cord about a meningocele anchor the cord and may result in sufficient tug, as the spine elongates, to provoke spasticity, inversion deformities of the feet, trophic phenomena, and sphincter paralyses if such did not already exist. I feel, therefore, that this is a consideration which should always be kept in mind and toward this end the repair should be made as thoroughly as possible without causing added damage. The following case illustrates the point.

CASE REPORT 1

History: M. C., a white girl, four years of age, was admitted to the hospital because of spastic paraplegia and dorsal scoliosis. At birth there was present a high dorsal spina bifida and meningocele the size of a grapefruit. Nevertheless, she walked at the age of two. At three the meningocele was removed elsewhere. Some months later she began to drag the right foot. Spastic paraplegia progressed in spite of corrective orthopedic measures so that at the age of five she was bedridden and was developing areas of anesthesia on the lower extremities.

Treatment: In October 1941 the old operative site was re-explored. It was found that the dural pedicle of the original meningocele had not been removed. The cord was anchored to the pedicle and it was obvious that it had been stretched during elongation of the spine. The cord was freed from its attachment. Following this procedure the patient improved steadily and was able to walk alone at the last examination in December 1942.

The nerves which enter and become lost in the sac wall are sensory and are probably of little value. Less harm is done by sacrificing them than by trying to dissect them out and filling the already too small spinal canal with a mass of loose ends.

Inasmuch as hydrocephalus begins to develop in an occasional case following the repair of a myelomeningocele, it is felt that the sac of the latter may serve as an absorbing mechanism and as much of it as feasible should be preserved. I have always adopted the policy previously outlined, however, of removing the sac and all superfluous material and closing the defect where possible.

It is the meningocele which is repaired and not the bifid spine, except insofar as soft tissue is used to close over the defect. I have never seen a meningocele recur.

Spina Bifida Occulta: The defect is so named because the presence of the bifid spine is not as evident as when a meningocele coexists (spina bifida manifesta). The defect may consist of only a bifid vertebral arch with no involvement of the nerves and cord or the latter may be adherent to the overlying tissues through a dural defect. It is the latter case which may merit attention. The attention is aroused usually when the child is in the growing stage; that is, from six to twenty years of age. The first complaint may be spasticity and weakness in one leg and ankle. Other developments are weakness of sphincter tone, trophic ulcers, and trophic deformities of the feet with loss of toes. In such cases one should immediately examine the back carefully, including the use of roentgenograms to exclude a spina bifida. Ordinarily the defect will be betrayed by a tuft of hair, lipoma or flat nevus over the site of the defect. When such a lesion is associated with develop-

ments as outlined above, operation is indicated with the object of freeing the cord from any anchoring attachments it may have.

Cranium Bifidum: This defect usually occurs in the midsagittal plane and is associated with a sac. The sac may be a simple meningocele and con-



Fig. 4. A large occipital encephalocele which contained a portion of one occipital lobe. The latter was amputated during the repair with a good result.

tain only cerebrospinal fluid. The repair is simple, consisting of a ligation of the neck of the sac. If the sac contains brain it is termed an encephalocele (Figure 4). In this case the content of brain cannot ordinarily be replaced in the cranial cavity but is amputated with the electric cautery. The defect is covered with dura. Occasionally a portion of a ventricle will be contained in the encephalocele. In this case the term hydrencephalocele is used. The most common location in which encephaloceles occur is in the occipital region. They occasionally occur in the nasofrontal region where they may be mistaken for hemangiomas, mucoceles, and other lesions (Figure 5).

Hydrocephalus: Hydrocephalus occurs with and without other visible defects. It may be evident at the time of birth but often begins to develop some weeks or months after delivery. Cerebrospinal fluid is secreted by the choroid plexuses in the two lateral, the third and the fourth ventricles. The aqueduct of Sylvius provides the only normal outlet of the fluid into the fourth ventricle. The fluid escapes from the latter into the subarachnoid spaces through the foramina of Luschka and Magendie. Once in the subarachnoid space it circulates over the surface of the entire brain where four-fifths of it is absorbed into the venous system. Some of the fluid also circulates (by ebb and flow with respiration) in the subarachnoid space about the entire length of the spinal cord where it is presumed that about one-fifth is absorbed. A block of the circulation in the spinal subarachnoid space will not cause hydrocephalus. Hence, cord tumors in the cervical region which completely block the canal do not cause hydrocephalus. However, a defect or lesion which prevents the fluid from reaching the subarachnoid spaces about the cortex of the brain will cause a damming back of the fluid in the ventricles. The latter dilate to eventually become enormous cavities while the brain may become as thin as a sheet of cardboard. Since the infant's calvarium is not completely ossified, it enlarges also and often becomes an incredible size before death. The fontanels grow ever larger, the skull plates separate at the suture lines, and eventually the baby's face appears to be only an appendage to a tremendous head. The facies are characteristic, particularly the eyes which look downward in large sockets and expose the whites above.

The causes of congenital hydrocephalus which have been disclosed in the department of pathology at this hospital are as follows in order of frequency. (All of these causes are obstructive in nature. In my own opinion the old belief that hydrocephalus may be caused by an excessive production of cerebrospinal fluid—more than a normal absorbing mechanism can take care of—is entirely without foundation.)

(1) Arnold-Chiari malformation usually associated with partial rachischisis or myelomeningocele. In this case the tonsils of the cerebellum and medulla appear to have been pulled down into the cervical canal through the foramen magnum. The outlet of fluid from the ventricles is blocked at this



Fig. 5. Nasofrontal encephalocele containing a portion of the right frontal lobe. The repair was satisfactory but the child later died of infection.

point. The block is evidently only partial at birth in some cases and later becomes complete because some of these babies appear to have normal heads at birth.

(2) Adhesive arachnitis occluding the basilar cisternae and subarachnoid spaces over the cortex. These babies may also develop hydrocephalus after delivery and the cause of the arachnitis is often obscure. Perhaps subarachnoid hemorrhage sustained at the time of delivery is responsible in some cases.

(3) Partial and complete atresia or absence of the aqueduct of Sylvius. These babies present hydrocephalus at birth.

(4) A recent postmortem examination revealed an interesting cause of hydrocephalus, the only case of its kind of which I am aware. Not only all the ventricles but all the cisternae and subarachnoid spaces over the cortex were dilated showing that the point of obstruction was distal. The walls of the superior sagittal sinus were thick, leaving only a small channel through the sinus. The corticosinal veins were also smaller than normal. Hence the obstruction to the absorption of fluid in this case was at the venous portal itself.

Treatment: Much effort has been expended and many ingenious methods devised in an attempt to relieve this pitiable condition. It would seem that every conceivable means of establishing an outlet for the fluid has been tried; to mention some: silk threads have been placed from ventricles to scalp; tubes and wicks from ventricles to the muscles of the neck; artificial fistulae made from ventricles to basilar cisternae. In the communicating type silver tubes have been placed so as to drain the fluid from the spinal cul-de-sac into the peritoneal cavity (Cushing tried this in six cases. It perhaps deserves further attention.) All such methods directed at providing an absorbing mechanism for the fluid have been disappointing because the fistulae heal or the fluid becomes misdirected into the subdural space or because fascia and muscle will not permanently maintain absorption. There have been occasional successes after puncturing the floor of the third ventricle.



Fig. 6. Myelomeningocele associated with moderately advanced hydrocephalus. The myelomeningocele was successlly repaired following which the choroid plexus was destroyed on one side. The occipital lobe waa about one-eighth of an inch thick but the baby appeared normally bright. The fontanels remained soft for four months and then again became tense when the child had a cold. In a recent letter the parents stated that the fontanels were again soft.

The best successes recently have been obtained by destroying the choroid plexus in the lateral ventricles (on both sides if necessary), thus diminishing the production of fluid. This is the treatment used at this clinic (Figure 6). Cauterization with the electrocautery is the safest method; but whatever the method, it is necessary that all visualization be carried out through a lens system without removing the ventricular fluid. If the ventricles are emptied of fluid, the cortex collapses and the patient succumbs.

Here again the advisability of attempting any treatment of moderately advanced or advanced hydrocephalus is debatable. Indeed many of these infants prove to have such major malformations of the brain as to make anything approaching normal development impossible. It is not easy to accurately evaluate the mental status of an infant under two months of age. For axample, such an infant came to my care recently. It was a beautiful baby and appeared to be bright. It expired following operation and examination revealed very little more than the basal ganglia to be present. The mortality rate from such an operation has been very high, but the cases I have treated have been advanced. I have hesitated to treat early cases before it becomes evident that the hydrocephalus is progressing, because in an occasional instance the latter becomes spontaneously arrested. A mildly enlarged head with tense fontanel is not necessarily doomed, but if enlargement progresses steadily out of proportion from week to week, one can, without error of judgment, predict that arrest will not occur spontaneously.

The operation is done through a small trephine in the occipital region and is adapted to all comers irrespective of etiology. Naturally the results are best for those who have only a partial block to absorption and are poorest when the block to absorption is complete. I say the procedure is adapted to

all comers because it is uncommon for hydrocephalus in infancy to be due to neoplasm or causes other than those previously mentioned. A mistaken diagnosis has been made only once, to my knowledge, in the past seven years. The infant had all the appearances of congenital hydrocephalus. When passing a ventricular needle through an occipital lobe to ascertain the thickness of the cerebral wall, an abscess the size of an orange was encountered. It was immediately drained in the usual manner, the baby recovered, and the result was good. This came as a complete surprise, there having been no contributing history whatsoever.



Fig. 7. Dermoid over the anterior fontanel. It shelled out easily and had no connection with the intracranial contents. Four such cases have appeared in the clinic since 1935.

Ventriculography is impractical as a routine diagnostic procedure because of the great size of the ventricles. Strong transillumination may serve to distinguish an ordinary obstructive hydrocephalus from expanding masses above the tentorium, such as hematomas and abscesses. Also, when one inserts the lens system into a ventricle he might soon become aware that he is not dealing with obstructive hydrocephalus but with a supratentorial mass.

After all, when the situation is thoroughly explained to the parents, they ordinarily choose the operation "for what it may be worth" and any sins of commission are more tolerable to them than those of omission. Not only this but the skill and knowledge which is consummated from such efforts may prove to be life saving to those infants who otherwise would develop normally.

DERMOIDS OF THE SCALP

Small ephithelial inclusion cysts may appear anywhere in the scalp but those in this clinic which have been large enough to cause concern were situated directly over the anterior fontanel (Figure 7). Before operation one could not be certain but that the tumor was an encephalocele. They proved to shell out easily, however, and had no connection with the intracranial contents. They usually contained desquamated epithelium and pearly cholesterin.

SACRAL DERMOIDS AND TERATOMAS

These may be present at birth and ordinarily grow rapidly to an enormous size. They arise from cell rests located between rectum and sacrum and have a very firm attachment to the coccyx so



Fig. 8. Sacral dermoid. The gross specimen is shown in the insert. (Scale in inches.)

that the latter may have to be removed with the tumor. The mass grows out from under the sacrum and may appear to be posterior to the latter (Figure 8). It is sometimes confused with a meningocele. A roentgenogram, however, will reveal that the sacrum is not bifid but displaced posteriorly. Opaque tissue such as rudimentary teeth may betray the tumor.

An attempt should be made to remove the tumor entirely. The plane of cleavage should be followed carefully, recognizing that the rectum is closely applied to the tumor anteriorly. After the tumor is removed the rectum is seen to be lying in the bottom of the cavity. A plane of cleavage is not always present throughout. In one case a teratoma

partly enveloped the rectum and was so adherent to the vaginal wall and uterus as to make separation technically impossible.

CUTANEO-DURAL SINUS

This, as the name implies, is a sinus which extends from the dural canal to the outside. The sinus tract is lined partly by dura and partly by epithelium. It may communicate with the subarachnoid space, in which case cerebrospinal fluid will drain from it. I recall two cases in the department of pediatrics in each of which a tiny sinus was present over the cervical spine. The sinus was only large enough to admit a horse hair and beads of clear cerebrospinal fluid would emerge from it. These sinuses are located at the upper or lower ends of the spinal canal. The following two cases illustrate some of the problems involved. These sinuses should be dissected out thoroughly and to their entrance into the dural canal without leaving buried remnants.

CASE REPORT II

History: F. K., a white female thirty-six years of age, was admitted to the hospital. She complained of a "fistula" in the back which had been present since birth. Hair extruded from it and from time to time a creamy material drained from it. Cerebrospinal fluid had never appeared to her knowledge. It had caused no particular trouble until eight months prior to admittance when the surrounding region became inflamed, tender and painful.



Fig. 9. Cutaneo-dural sinus over the low lumbar region (patient F.K.). Tufts of hair can be seen emerging from it. The entire dural and cutaneous portion of the sinus was removed with a good result.

Examination: Inspection revealed a rather large sinus over the fourth lumbar vertebra. It contained some hair and desquamated epithelium (Figure 9). The region around it was inflamed and tender. An x-ray film of the spine revealed the sacrum and lower three lumbar vertebrae to be bifid. The latter were malformed and dense.

Operation: After one month the inflammation subsided. An elliptic incision was made about the sinus. The epithelial portion of the tract proved to be continuous with a dural diverticulum about one inch long, but the fistulous tract was obliterated at the junction of the dural and epithelial portions. The dural tube was ligated with silk close to the normal dura and thus the entire fistulous tract removed. The wound healed by primary intention and the result was good. Microscopically, the walls of the tract contained cartilaginous tissue, dense hyalinized connective tissue and some nerve bundles with small neuromata—a picture suggestive of teratoma.

CASE REPORT III

History: D. L., a white male twenty-five years of age was admitted to the hospital in October, 1942. He stated that since birth he had had a small cyst over the lower spine. From time to time it would break and drain creamy and cheesy material. In 1926, at the age of nineteen, an operation was performed to cut out the cyst. Three years ago, at the age of twenty-two, he began to experience weakness of the legs and incontinence of urine. A lump would appear at the operative site, rupture, and extrude cheesy material. His symptoms would then improve. He experienced a number of such episodes with less relief each time. His complaint on admittance was of complete loss of bladder control and a generalized weakness and atrophy of the lower extremities with a twenty degree flexion contracture.

Examination: A roentgenogram showed that the lumbar spinal canal had been enlarged by chronic pressure erosion. A diagnosis of cutaneo-dural sinus was made with the idea that products of desquamation had been forced into the lumbar spinal canal and were compressing the roots of the cauda equina.

Treatment: A laminectomy was done which verified the diagnosis. The cauda equina had been largely destroyed by a compact accumulation of dermoid desquamation which came from the remnant which was left at the previous operation. Had the entire sinus been removed the subsequent events would have been prevented.

The types of cases treated at the State University of Iowa Hospital in the past seven years are briefly listed below. This list includes only patients upon whom operations were performed. Numerous cases of partial rachischisis and others for which surgery was felt to be contraindicated are not included. Good result is in reference to the surgical status and indicates that the patient was discharged fully recovered from surgery and with a satisfactory repair.

Simple meningocele of spine: two cervical, two lumbar, and one sacral. One baby with cervical meningocele died of infection. Good results in the others.

Myelomeningocele of spine: one dorsal, incompletely repaired elsewhere (see case report I); eight lumbar, one was ruptured before operation and the baby died; and ten lumbosacral, four of which were ruptured before operation with death occurring in one patient.

Bifid sacrum with end of cord in fatty tissue: two cases with only operative verification in both.

Cranium bifidum: with simple occipital meningocele, five cases, good results; with occipital encephalocele, one case, good result; with occipital hydrencephalocele, one patient was ruptured before operation, the repair was good but the baby died two months later with hydrocephalus. Repair was good in another and epileptic seizures developed later; Nasofrontal encephalocele, one case, patient died of infection.

Hydrocephalus: sixteen cases, one with encephalocele (satisfactory result at time of discharge); five with myelomeningocele, of which three patients died. One death occurred in a baby who developed hydrocephalus following repair of myelomeningocele. This is the only case of this kind in our series. Of the remaining ten cases without meningocele, four died and six were discharged in satisfactory condition but their subsequent course is not known.

Dermoid of scalp (over anterior fontanel): four cases with good results in all.

Dermoids and teratomas of sacral region: five cases with good results in three and two deaths.

Cutaneo-dural sinus: the two cases are reported above under this heading.

Special cases: one infant had a lemon sized fibrosarcoma of the left temporal muscle which was present at birth. The entire temporal muscle was removed, followed by radiation. The result was good at the time of discharge. Present status not known.

One infant presented a somewhat large head but there was no increased intracranial pressure or obstructive hydrocephalus. Complete aplasia of the right frontal lobe was easily determined by strong transillumination.

CESAREAN SECTION AT THE UNIVERSITY OF IOWA*

NORMAN E. WENTSLER, M.D., and JOSEPH H. STOUT, M.D.

Between July, 1926, and December 31, 1942, 233 cesarean sections were performed at the University Hospitals. A previous article[1] included statistics concerning the first 67 abdominal deliveries, while this report summarizes data on the total experience and contrasts the first 67 (Series I) with the remaining 166 (Series II). Cesarean section has been uniformly defined as the abdominal removal of a fetus weighing 1,500 (3.3 pounds) or more grams from the uterus. Such arbitrary definitions, although necessary, occasionally lead to absurdities. For example, in strict conformity with the rule, a record of abdominal delivery with survival of a fetus weighing 1,195 grams (2.6 pounds) was excluded from the series. On the other hand, no infant, alive or dead, weighing 1,500 or more grams was excluded. Uterine rupture (six patients) is not included, but will be considered in a separate section of this report.

Cesarean section was performed 233 times in a series of 16,501 deliveries, an incidence of 1.4 per cent. There were five maternal (2.1 per cent) and

TABLE I

Series	Women Delivered, Total	Cesarean Section		Mortality Rates			
				Maternal		Fetal	
		Number	Per cent	Number	Per cent	Number	Per cent
I 7/1/26—10/31/35	5,446	67	1.2	3	4.5	4	5.9
II 11/1/35—1/1/43	11,055	166	1.5	2	1.2	11	6.6
Totals.....	16,501	233	1.4	5	2.1	15	6.0

fifteen fetal (6.0 per cent) deaths. Detailed figures, including those for Series I and II are shown in Table I.

INDICATIONS

The indications for the cesarean sections are given in Table II. It is of interest to note that almost two-thirds of the operations were done because previous abdominal delivery had been performed elsewhere.

The increase in the percentage of the miscellaneous indications from Series I to Series II prompted an inquiry into the cause. It has long been the clinic policy that elderly primigravidas, patients with cardiac disease or non-obstructing tumors, with medical need for sterilization, hydrocephalus, marginal and some partial placenta previas, mild abruptios, and diabetes do not constitute

*From the Department of Obstetrics and Gynecology.

TABLE II

Indications	Series I		Series II		Totals	
	Number	Per cent	Number	Per cent	Number	Per cent
Previous Cesarean Section	42	62.8	99	59.6	141	60.6
Contracted Pelvis (nearly all relative disproportion)	12	17.9	23	13.9	35	15.0
Soft Tissue Edema or Scarring	5	7.6	1	0.6	6	2.6
Obstructing Tumor.....	2	2.8	10	6.0	12	5.1
Ankylosis of Hip	1	1.5	7	4.2	8	3.4
Carcinoma of Cervix	1	1.5	3	1.8	4	1.7
Miscellaneous	4	5.9	23	13.9	27*	11.6
Totals	67	100.0	166	100.0	233	100.0

Indications

*Includes: Interruption of pregnancy (3); placenta previa (3); elderly primigravida (3); heart disease (3); non-convulsive toxemia (2); transverse presentation (2); and one each of: pregnancy after interposition operation, soft tissue dystocia, unilateral lameness, prolapsed cord, diabetes, previous myomectomy, prolonged labor, cardiovascular disease, metaplasia of the cervix, contraction ring, and dystocia of unknown origin.

indications for abdominal delivery. Furthermore, it is felt that prolonged labor, eclampsia, neglected transverse presentation, and coincidental appendectomy represent definite contraindications to cesarean section. Despite these beliefs, many of the operations of the miscellaneous group fall into these categories (see footnote, Table II) and were usually performed without consultation, in the mistaken belief that abdominal delivery would improve the chances for the mother and the child. That performance of abdominal delivery on poor indications does not improve maternal and fetal mortality rates is graphically portrayed in Table III. All (two) of the maternal and more than

TABLE III

	Number Cesarean Sections	Mortality			
		Maternal		Fetal	
		Number	Per cent	Number	Per cent
Acceptable Indications (according to S. U. I. Hospital Standards)	148	0	0.0	5	3.4
Questionable Indications	18	2	11.1	6	33.3
Totals	166	2	1.2	11	6.6

Outcome of Cesarean Section in Series II according to Acceptability of Indications

half of the fetal deaths of Series II occurred in a group of eighteen cesarean sections judged at staff conference to have been, at best, not fully justified.

INDICATIONS FOR PREVIOUS SECTIONS

The indications for the cesarean sections performed elsewhere in previous pregnancies are outlined in Table IV. The indications for 23 of these 99 abdominal deliveries in Series II—contracted pelvis (17), obstructing tumors (4), and ankylosed hips (2)—fall into our group of acceptable indications. Two more might also be accepted; squamos metaplasia of the cervix thought to be an early non-invasive malignancy at the time of operation and a previously fractured pelvis.

TIMING OF OPERATION

It has long been recognized that cesarean section employed as an emergency procedure becomes increasingly dangerous for the mother with every additional hour of labor. It is only with operations performed electively before the onset, or during the first few hours of labor, that mortality rates can be minimized. In analyzing the time of operation in relation to the onset of labor, the

TABLE IV

Indications	Number
Reasons not known by the patient	17
Toxemia	17
Contracted Pelvis (subsequently confirmed at S. U. I. Hospital)	17
Contracted Pelvis (measured as adequate at S. U. I. Hospital)	12
Prolonged Labor	12
Bleeding (Placenta Previa)	10
Obstructing Tumor	4
Unsuccessful Forceps	2
Ankylosed Hip	2
Unusual Presentation	1
Ruptured Uterus (sutured)	1
Squamous Metaplasia of the Cervix	1
Postmaturity	1
Double Vagina	1
Healed Pelvic Fracture	1
Total	99

Indications for the Cesarean Section performed elsewhere in Previous Pregnancies

customary figure of six hours was chosen to separate elective and emergency procedures. Elective sections were done in the absence of labor or during its first six hours, whereas emergency operations were done when the patient had been in labor six or more hours. Since November 1, 1935, (Series II) 147 of the cases, or 89 per cent, fall in the first group, and only 19, or 11 per cent, in the second. It is interesting to note that both of the maternal deaths occurred in the group of emergency operations, confirming the generally accepted opinion that the use of cesarean section as an emergency procedure is hazardous. The 147 elective operations did not involve a maternal fatality.

TYPE OF OPERATION

Four types of operation are employed in this clinic: the classical, low cervical, cesarean hyster-

ectomy (total or subtotal) and extraperitoneal (Table V). In general it has been customary to use the classical or low cervical operation for elective, and the cesarean hysterectomy for emergency procedures. The extraperitoneal operation has

TABLE V

Type	Series I	Series II	Total
Classical	54	114	168
Low Cervical	6	30	36
Cesarean Hysterectomy	7	18	25
Extraperitoneal	0	4	4
Totals	67	166	233

Type of Operation

been attempted electively in three patients and used successfully on real indication in one patient. This type of operation will undoubtedly be more widely employed in the future. The Portes exteriorization operation has not been used.

The extensive use of classical section deserves comment in view of the considerable publicity accorded the low cervical procedure. Cesarean section, performed electively, carries a minimal maternal risk, appoaching 1 per cent, irrespective of the type of operation. Since most of our abdominal deliveries are performed before the onset of labor, and since the classical operation is technically the simplest, there is every reason to employ it extensively. On the other hand, labor of more than six hours constitutes a rigid contraindication for the classical operation. Actually, the classical section at the University of Iowa employs a midline subumbilical skin incision, with the uterine incision frequently half in the upper and half in the lower segment.

MATERNAL MORBIDITY

Morbidity is defined as a fever of 100.4 degrees or higher on any two postoperative days excluding the day of delivery, the temperature being taken every four hours. According to these standards there were 134 febrile patients (Series II), or 57.5 per cent, of whom only 53, or 22.7 per cent, suffered protracted temperature elevation.

The more serious postoperative complications were: abdominal fistula (1); thrombophlebitis (2); severe atelectasis (1); shock (1); endometritis with bacteremia (1); pelvic cellulitis (1); parametritis (1); and bronchopneumonia with abscess of the abdominal wound (1).

MATERNAL DEATHS

In the first series of 67 cases there were three maternal deaths, 4.5 per cent. However, in the second series of 166 cases there were two maternal deaths, 1.2 per cent. This represents a decrease in the mortality rate to less than one-third that of the first series. The total deaths numbered five, or 2.1 per cent of the entire series. A summary of each of the five fatal cases, arranged chronologically, follows:

1. The patient expired soon after the intrathecal injection of a spinal anesthetic in preparation for elective section and before the abdomen was incised. The infant survived.

2. Death from peritonitis followed the rupture of an obstructing carcinoma of the sigmoid. The peritonitis precipitated labor and was evident when the abdomen was opened.

3. Peritonitis developed following a purely elective cesarean section performed before the onset of labor, and death occurred early in the puerperium. No vaginal examination or manipulation had been done.

4. A cesarean hysterectomy was done because of prolonged labor and uterine inertia, and a living child weighing 4,036 grams (approximately 8.88 pounds) was obtained. A localized pelvic abscess, which was followed by peritonitis, resulted in death on the thirtieth postoperative day.

5. A cesarean hysterectomy was done late in labor because of a neglected transverse presentation, prolapse of the umbilical cord, and uterine inertia. The infant was stillborn and weighed 3,765 grams (approximately 8.28 pounds). The patient died from peritonitis on the tenth postoperative day.

FETAL DEATHS

In Series I, July 1, 1926, to November 1, 1935, there were four fetal deaths:

1. A premature fetus weighing 1,500 grams was delivered from a patient whose pregnancy was interrupted because of a pre-existing acute disease.

2. Pregnancy was interrupted for the sake of the mother without regard for the infant, which weighed 1,768 grams at birth and did not survive.

3. One child of a twin pregnancy was not resuscitated.

4. An achondrodystrophic dwarf was unrecognized prior to delivery, despite routine roentgenologic examination, and could not be resuscitated.

In Series II, November 1, 1935, to January 1, 1943, there were eleven fetal deaths:

1. A patient with congenital heart disease suddenly developed cardiac failure in early labor. The infant was known to be dead eleven days prior to the cesarean section.

2. The umbilical cord prolapsed through the cervix and a cesarean section was done. The infant died shortly after birth.

3. A large vaginal cyst obstructed the birth canal and made abdominal delivery imperative although the fetus had died before the operation.

4. Abruptio placentae occurred just prior to the cesarean section. The infant weighed 2,850 grams and died shortly after delivery.

5. A premature infant weighing 1,520 grams died three hours after cesarean section to interrupt pregnancy for carcinoma of the cervix.

6. The infant was known to be dead two days prior to the cesarean section done because of a large vaginal cyst obstructing the birth canal.

7. Despite recognized fetal death prior to operation, it was performed because of a tetanic uterus, severe cardiovascular disease and no improvement with treatment.

8. A pelvic mass the size of a basketball prevented vaginal delivery and a macerated stillborn infant weighing 3,100 grams was delivered abdominally. Fetal death was recognized preoperatively.

9. Following repeated attempts at vaginal delivery, the fetus died; a tight contraction ring developed and a destructive operation was said to be impossible.

10. Cesarean section performed for a neglected transverse presentation with prolapsed umbilical cord resulted in a stillborn child weighing 3,765 grams.

11. A second or repeat cesarean section was performed because the patient was in premature labor for three hours. The infant, weighing 1,925 grams, died twenty-four hours after delivery.

Of the eleven fetal deaths occurring in Series II, six infants were known to have succumbed prior to the cesarean operation. Four of these infants had to be delivered abdominally for definite and acceptable maternal indications.

RUPTURED UTERUS

There were six uterine ruptures occurring in five women. All of the women and one of the children survived. Five of the uterine ruptures followed previous cesarean sections and one developed in a parturient gravida xi with a previously intact uterus, after medical induction of labor. Four of the ruptured uteri were removed and two were sutured. One of these patients was sterilized; the other was not. Exactly fourteen months later the latter was again admitted in severe shock with a rigid abdomen, and at operation the second uterine rupture in the same patient was discovered and hysterectomy performed. It is interesting to note that in the series of women undergoing cesarean section prior to admission to the University Hospital there was one patient with a previously ruptured uterus which had been repaired. Despite these cases, it is our considered opinion that complete uterine rupture is best treated by hysterectomy unless the rent is small and other conditions optimal. The single infant survival occurred in a patient twenty-two years of age who had had four previous cesarean sections. She was in labor approximately thirty minutes prior to elective cesarean section without signs or symptoms of a ruptured uterus. When the abdomen was opened the uterus was found ruptured but the infant was still alive. It was the opinion of the attending staff that the rupture had occurred shortly before or about the time the abdomen was incised.

The advisability of following the old dictum, "once a cesarean, always a cesarean," remains a moot question. The fetal mortality rate following uterine rupture approaches 100 per cent despite the single survival—due to a fortuitous chain of circumstances—in our series. The maternal mortality rate for rupture through a cesarean scar is not well established, although it certainly does not approach that of rupture through a previously intact uterus. In other words, poor healing of a uterine wound results in relatively avascular scar tissue, predisposition to subsequent rupture and to relatively minor hemorrhage if such rupture occurs. This was well exemplified in four of five of our cases, since some hours elapsed in each instance between rupture and operation. The best available information suggests that after a previous cesarean section performed for an accidental complication of pregnancy or labor, the pregnant woman and her fetus face approximately equal risks by either of the two possible delivery routes, abdominal or vaginal.

If a spontaneous labor occurs in the interim, cesarean section will, of course, not again be necessary since the uterine scar has proved its adequacy by the vaginal delivery.

SUMMARY

Cesarean section was performed 233 times in a series of 16,501 deliveries, an incidence of 1.4 per cent. There were five maternal (2.1 per cent) and fifteen fetal (6.0 per cent) deaths. In addition to the cesarean sections there were six uterine ruptures, two in the same woman in successive pregnancies.

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THE PREVENTION OF RECURRENT UROLITHIASIS*

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The treatment of a stone in the urinary tract involves not only the removal of the stone but also the prevention of recurrent stone formation. In recent years additions to our knowledge of the etiology of urolithiasis and better methods of therapy have cut down the incidence of recurrent stone formation from 15 per cent to 4 per cent. The prevention of such recurrent stone depends essentially upon the meticulous treatment of all the factors which predispose to stone formation. These factors are: (1) vitamin A deficiency; (2) increased urinary excretion of crystalloids; (3) stasis in the urinary tract; (4) urinary tract infection; (5) changes in the hydrogen ion concentration of the urine; (6) less well understood changes in the colloids of the urine; and (7) focal infections. The importance of each of these factors varies with the individual case and with the type and location of the stone. It is the purpose of this report to present a plan of treatment for the prevention of recurrent urolithiasis based upon the control of the factors outlined above.

It has not been proved that vitamin A deficiency *per se* produces stone in the human urinary tract, although the experimental work of Higgins, Steiner, and others proves beyond a doubt that it does so in the animal urinary tract. Jewett in a careful clinical and postmortem study emphasized the extremely low incidence of vitamin A deficiency changes in patients with manifest urolithiasis. In contradistinction some of the clinical evidence presented by Higgins and Kearns is suggestive, and the author has emphasized that acute vitamin A deficiency may occur during the actual formation of the stone and disappear by the time the urolithiasis has become manifest. The vitamin A deficiency predisposes to stone formation in animals in two ways: First, it produces epithelial desquamation thus making nuclei upon which the crystalloids may precipitate; and, second, it creates an alkaline urine thus decreasing the solubility of the calcium salts and causing them to precipitate. Since vitamin A in adequate doses can do no harm unless given in conjunction with vitamin D (which produces hypercalcinuria) it should be administered in all urolithiasis cases to prevent recurrence, although as discussed above it is not yet proved that vitamin A deficiency is definitely an important factor in recurrent stone formation.

The factor of hyperexcretion of crystalloids is of utmost importance in all cases of urolithiasis. The necessity of the presence of this factor in cases of cystine and uric acid urolithiasis has been known for many years; and, recently, the importance of this factor in calcium urolithiasis has been emphasized by Albright, the author and others. Hyperexcretion of uric acid or cystine is due to an abnormality of protein and purine metabolism. It produces stones in an acid urine because these substances are relatively insoluble at a low hydrogen ion concentration. Although the hyperexcretion of these substances cannot be controlled by diet or other means, stone formation can be prevented by keeping the urine alkaline and thus keeping these substances in solution. The factors associated with hypercalcinuria are shown in Table I. In only one of these—hyperparathyroidism, which can be recognized by the characteristic changes in the blood phosphorus and calcium—it is possible to control the hypercalcinuria. This is done by removal of the associated parathyroid adenoma. In other cases the only thing which can be done to counteract the hypercalcinuria is the maintenance of a large fluid output so that the concentration of calcium in the urine is lowered. It is of great importance, therefore, to know whether hyperexcretion of crystalloids is present in the individual patient, and if this itself cannot be controlled all other factors should be meticulously controlled so that the occurrence of stone formation might be prevented.

TABLE I

Chart Showing Urinary Calcium Excretion Per Twenty-four Hours Under Different Conditions

Condition	Urinary Calcium
1. Body immobilization	350-450
2. Bone disease	
First few days	Normal or high?
Early weeks	300-450
Late years	100-450
3. Marked renal damage	30- 60
4. Endocrine disturbances	
Hyperparathyroidism	350-550
Hyperthyroidism	Normal* or high
Hyperpituitary function	Normal* or high
5. "Idiopathic" high urinary calcium; 50 to 66 per cent of patients with calcium stones. Not due to difference of absorption	300-500
6. The normal individual	200±

*Leriche.

Urinary tract stasis is a frequent cause of recurrent stone formation, Table II. Conditions such as congenital hydronephrosis, prostatic hypertrophy, and stricture of the urethra may have predisposed to the formation of the first stone. These conditions must be corrected if recurrence is to be prevented. Stasis, especially of the calyces, may be caused by trauma due to the presence of a stone or by persistent dependence of one group of calyces due to immobilization of the patient by traction, a body cast, or postoperative convalescence. In such cases it is necessary to correct the

*From the Department of Urology.

deformed calyx, calycectomy, and to have adequate movement of the patient from side to side to prevent one set of calyces from being persistently in a dependent position.

TABLE II

Conditions Predisposing to Calcium Urolithiasis

1. Disease producing prolonged immobilization of the body.
   a. Fractures of the spine or extremities associated with prolonged immobilization of large bones.
   b. Chronic osteomyelitis.
   c. Chronic arthritis, or other bone joint disease, producing immobilization of large portions of the skeleton.
   d. Neurologic damage as a result of trauma or disease producing prolonged immobilization.
   e. Chronic visceral disease requiring prolonged recumbency.
2. Changes in the Urinary Organs.
   a. Congenital anomalies associated with stasis.
   b. Acquired obstructions—stricture of urethra, etc.
   c. Paralysis of urinary passageway.
   d. Introduction of infection into urinary tract.
   e. Foreign body in urinary passageway.
3. Endocrinopathies.
   a. Hyperparathyroidism.
   b. Hyperthyroidism?*
   c. Hyperpituitary disease?
4. Focus of infection elsewhere in body?
5. Vitamin Deficiency or Excess.
   a. Vitamin A deficiency?
   b. Vitamin D excess.
6. Metabolic Abnormalities.
   a. Idiopathic hypercalcinuria.
   b. Changes in colloids?

*Note.—Conditions with question mark are put in mainly upon a theoretical basis. Others are put it upon clinical basis.

Urinary tract infection produces recurrent stones first by producing epithelial desquamation and clumps of pus cells, thus forming nuclei upon which further precipitation of the crystalloids occurs. Second, it usually produces an alkaline urine which tends to precipitate calcium phosphate and calcium carbonate and thus produce a recurrent calcium stone even though the original stone may have been of uric acid or cystine. The control of urinary tract infection is therefore of considerable importance. The measures taken to control infection are: one, removal of urinary tract stasis as was discussed in the previous paragraph; two, control of the infection by means of irrigation of the urinary tract with sulfanilamide solution or other antiseptic solutions; and, three, the administration of the sulfonamide derivatives. The choice of drug in such cases presents a problem because of the variations in the solubility of the sulfonamides.

The sulfonamides have improved greatly the control of urinary tract infection because of their extremely high therapeutic efficiency. However, the newer derivatives which are most successful in the control of pyogenic infection are relatively insoluble, and themselves precipitate to form a urinary stone or the nucleus for a urinary stone. Such a case is described by Newman. At the present time the following drugs are usually used in the control of urinary tract infection: (1) sulfanilamide, (2) sulfapyridine, (3) sulfathiazole, (4) sulfadiazine, and (5) sulfacetamide. It has been found that sulfathiazole, sulfadiazine, and sulfacetamide are less toxic and control the infection better than sulfanilamide. However, sulfadiazine, sulfapyridine, and sulfathiazole are relatively insoluble, as are their acetylated derivatives. All three of these drugs will produce precipitation in the urinary tract, therefore predisposing to recurrent stone formation. On the other hand, sufacetamide, which has a therapeutic efficiency approaching that of sulfathiazole and is not in the ordinary dosages any more toxic than sulfathiazole, is very soluble—in fact, as soluble as sulfanilamide (Table III). In a series of 250 patients treated with this drug at the University Hospital during the past several years, no case of urinary concretion has occurred. This is of special importance in those cases where stasis of any type is present. Therefore, it has been the practice to use sulfacetamide as the sulfonamide of choice in patients with stasis where stone formation is feared. If this is not tolerated or does not control the infection adequately, sulfathiazole or sulfadiazine is used. In a large majority of patients, however, it has proved to be very satisfactory.

TABLE III

The Solubility of the Sulfa-Derivatives in Urines of Varying Hydrogen Ion Concentrations at Room Temperatures

Compound	Mgms % *p*H 4.6	Mgms % *p*H 6.0	Mgms % *p*H 7.7
Sulfapyridine	44	45	46
Sulfathiazole	123	158	164
Sulfadiazene	10	68	112
Sulfanilamide	616	944	990
Sulfacetamide	638	1200	1076

Note that alkalinity produces only a slight increase in the solubility of the sulfapyridine and sulfathiazole compounds but a rather significant increase in solubility of the sulfadiazine. Note the relative insolubility of all *p*Hs of sulfapyridine, sulfadiazine and sulfathiazole as contrasted to the sulfanilamide and sulfacetamide. The acetylated forms follow the same order of solubility as the above.

The control of the *p*H of the urine is also of considerable importance since it, to a large extent, determines the solubility of the crystalloids. To prevent recurrence of cystine and uric acid stones the urine must be kept at a *p*H of 7.0 or over. This usually is readily done by the regular administration of small doses of sodium bicarbonate. Check on the *p*H of the urine is performed easily by the patient with nitrazine paper. To prevent the occurrence and recurrence of calcium stones the *p*H of the urine should be kept below 5.8. In patients without hypercalcinuria and with urinary tract infection this is done by giving an acid ash diet supplemented with ammonium chloride or nitrate, grains 60 daily. If hypercalcinuria is present, the excess calcium excretion produced by the acid forming diet neutralizes the effect of the lowered *p*H and very little beneficial result is obtained. In such cases the best results are obtained by a neutral ash diet and the maintenance of a large fluid output. In the presence of urinary tract infection, an acid ash diet is contraindicated be-

cause no change in *p*H is obtained and increased urinary calcium excretion is induced. In such cases attempts should be made to change the *p*H of the urine by the local irrigation and instillation of acid solutions. These can be applied by means of nephrostomy tube, ureteral, or urethral catheter. One very useful solution is 0.25 per cent acetic acid solution.

The relationships between the colloids of the urine and urolithiasis are only theoretic. No therapy from this point of view has as yet been found useful.

The eradication of focal infections in patients with urolithiasis is usually of little value, although at times striking results are obtained. The relationship between such infections and urolithiasis is not definitely proved.

Based upon the discussion of the etiologic factors of urolithiasis in the previous paragraphs, a plan of study and treatment for such patients has been evolved and found useful. This is presented in Tables IV to VI and consists of a series of diagnostic, medical, and surgical measures. With regard to these, certain points should be emphasized: (1) complete study and treatment is indicated in all patients but variations in individual cases will be necessary depending upon the findings; (2) in all cases where a situation predisposing to stone has been present or where a stone has been removed a regimen of medical treatment and frequent checkup examinations is indicated for at least six months; (3) in all cases where one or more factors are present and cannot be cured, treatment and checkup examinations are necessary permanently.

TABLE IV

Diagnostic Measures to Be Used in Patients with Urolithiasis

No.	Measure	Remarks
1.	History:	Suggestive of:
	Prolonged recumbency	Hypercalcinuria
	Bone disease	Hypercalcinuria
	Arthritis	Hypercalcinuria
	Hyperthyroidism	Hypercalcinuria
	Vitamin D administration	Hypercalcinuria
	Gout	Hyperexcretion of uric acid
	Infections	Focus of infection
	Urinary tract disease	Urinary tract infection or stasis
2.	General physical examination	
3.	Serum Calcium	Normal is 9 to 11 milligrams per cent rises in hyperparathyroidism
	Serum Phosphorus	Normal is 3 to 4 milligrams per cent lowered in hyperparathyroidism
	Blood uric acid	Normal is about 3 milligrams per cent raised in uric acid diathesis
4.	Renal function tests	
	Blood urea	
	Phenolsulphonephthalein excretion	
	Excretory urogram	
5.	Urinary calcium	Normal is 200 milligrams per day. Rough clinical estimation by Sulkowitch's test.[2]
	Urinary cystine	Chemical test*
6.	Urinary *p*H	Normal 4.5 to 7.0. Uusually about 6.0
		Acid in uric acid and cystine urolithiasis
		Alkaline with phosphatic stones
		About 6.5 with oxalates
		Alkaline usually in presence of infection
7.	Urinary tract infection	Gram stained smear
		Culture
		Urea splitting organisms?
8.	Urologic Examination	Is there stasis? Determine residual urine of all parts of the urinary passageway. Cystoscopy, pyelography, to aid in discovering this and other abnormalities. Also to determine accurately the nature and extent of damage to urinary tract by the stone.
9.	Focal infections	Teeth especially
10.	Type of stone	
	(A) Chemistry	Analysis after removal of stone important as it tells what crystalloids precipitated
	(B) Opacity to x-ray	Calcium stones—opaque
		Uric acid, cystine—usually nonopaque
	(C) Reaction of urine	Acid—Uric acid, cystine
		Alkaline—Calcium phosphate
		Neutral—Calcium oxalate

*Technic for Cystine in Urine: To 5 cubic centimeters of urine made alkaline with ammonium hydroxide 2 cubic centimeters of 5 per cent sodium cyanide solution is added and allowed to stand for 5 to 10 minutes. A few drops of a freshly prepared 5 per cent sodium iodide prusside is then added. In the presence of cystine a permanent deep purplish red develops.

TABLE V

MEDICAL MEASURES

To Be Used in Patients With Urolithiasis

No.	Measure	Remarks
1.	Vitamin A administration	To be kept up
2.	Control of diet:	
	a. To control urinary *p*H	Basic ash diet in cystine and uric acid lithiasis
		Acid ash in calcium urolithiasis unless infection or hypercalcinuria are present
	b. To control excretion of crystalloids (Usually not of much value)	Low in purines in uric acid lithiasis
		Low in oxalates in calcium oxalate stone
3.	Drugs:	
	a. To control *p*H of urine	1. Ammonium chloride 60 grains to make urine acid
		2. Sodium bicarbonate 30 grains daily if alkaline urine is desired
	b. To control infection	1. Sulfacetamide 60 grains daily is drug of choice
		2. Neoarsphenamine 0.3 grams two times weekly useful in some staphylococcus infections
		3. Other sulfonamides
4.	Control of stasis	1. Movement of patient
		2. Adequate drainage
5.	Maintenance of large fluid output	

TABLE VI

SURGICAL MEASURES

To Be Used in Patients With Urolithiasis

No.	Measure	Remarks
1.	Institution of adequate drainage	Urethral catheterization
		Ureteral catheterization
		Nephrostomy or pyelostomy
2.	Irrigation of urinary passageway with antiseptic solutions to control infection and special solutions to dissolve fragments of stone	Valuable solutions are: 0.8 per cent sulfanilamide solution
		0.25 per cent acetic acid solution
3.	Avoidance of psuedo recurrence	When removing multiple stones, or a branching stone, x-ray checkup during the operation is of great value to prevent a small stone from being left behind.
4.	Calyectomy and other operative procedures on urinary tract to correct acquired or congenital urinary stasis	
5.	Removal of focal infection	

SUMMARY

The recurrence of urinary tract stone in patients with urolithiasis is discussed from the point of view of the etiology of stone and a plan of management of such cases is presented which is useful in lowering the incidence of recurrent stone.

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TRANSPORTATION OF THE PSYCHOTIC PATIENT*

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The first impulse of the relatives and the physician of the markedly psychotic patient is to get him to an institution for care and treatment as soon as possible—and often, unfortunately, by "hook or crook." This is an understandable attitude. The presence in the home of a patient suffering from wild excitement, suicidal depression, or severe delusions of persecution demands immediate, drastic action for the happiness of the family and the welfare of the patient. Sometimes, however, the methods used to get the patient to a hospital may so interfere with the patient's attitude toward the institution and attending physicians that he will not respond to psychotherapy for weeks. Certain principles can be stated which may serve as a guide in this situation.

Honesty: The psychotic patient may appear to be completely unmoved by logic or reason, but experience has shown that later in the illness when the patient can describe and discuss the early phase of his disease, he frequently has excellent memory for that period and too often strong resentment of the methods by which he has been tricked into going to the hospital. Since a large proportion of these patients recover and return to live with the relatives who sent them to the hospital, and possibly go to the physician for further care, it is important that the patient be treated with as complete frankness and honesty as the situation permits. Above all, he should not be brought to hospital on some such pretense as an eye examination, a trip to the clinic, or any similar euphemism. He should be told, instead, that he is suffering from a mental, or (if you must sugar-coat the pill) a nervous illness for which he must go to the hospital.

Preparatory Medical Treatment: Many of these patients are difficult to transport because of their overactivity, agitation, or belligerency. In such instances drugs are essential. This decision is an easy one but the choice of drug is more difficult. First, I wish to mention a few "don'ts." In the patient who has a mild, chronic disorder, or one who must wait some time for hospitalization, bromides should be avoided. A certain percentage of people do not tolerate these salts. Instead of being excreted by the kidney, they pile up in the blood, occasionally reaching alarming levels in a very short time. This produces a complicated psychotic picture which may continue for weeks after the drug is withdrawn and the blood bromide level reduced. A pathologic mental process appears to be released by the drug which continues even after the drug is withdrawn.

Another drug which should always be avoided in a psychotic patient is morphine. Morphine often acts as a stimulant, increasing rather than diminishing the patient's abnormal behavior. In these patients the cortical control of behavior has been reduced to produce the psychosis; morphine narcosis further weakens cortical control allowing full sway to the psychotic behavior previously inhibited.

If, because of overactivity and antagonism, a patient has to be rendered somnolent for transportation, two drugs have proved most useful in our experience. These are paraldehyde and sodium iso-amylethyl barbiturate (sodium amytal). Paraldehyde is a safe drug in almost all patients regardless of age or physical condition. If the patient is cooperative, it can be given by mouth in doses of two to three drams. The hot, bitter taste can be somewhat concealed by cooling with ice and giving it in orange or grape juice. If the patient is uncooperative, force may have to be used in the administration. Then, either tube feeding or rectal instillation is recommended. If given by the rectal route, three to five drams can be given with an equal amount of mineral oil as a retention enema. The addition of the oil reduces the irritating effect which may lead to expulsion. Paral-

*From the Department of Psychiatry.

dehyde is the drug thought best to control the excited, overactive, or sleepless patient in any period which may elapse prior to hospital care. Another drug which has been largely lost sight of in the deluge of proprietary advertising is barbital, a barbiturate of prolonged action and minor toxicity. In five to ten grain doses it provides refreshing nighttime sleep and may be used for daytime sedation. Also, sodium amytal is used for the same purposes. It can be given in fairly large doses by mouth, intramuscularly, or intravenously. Seven and one-half grains intravenously will produce reasonably deep sleep in most patients, and on awakening there will be a period of two to three hours in which psychotic symptoms are much relieved or entirely absent. The injection should be given slowly over a period of seven to ten minutes to avoid respiratory depression.

With the thirty-five mile speed limit in effect, this period of narcosis may not be adequate to bring the patient long distances. It has been found that the addition to the sodium amytal of ten milligrams of amphetamine sulfate (benzedrine) prepared for intravenous use prevents the drowsiness but prolongs the relief of psychotic symptoms. If this medication is to be used, it would be wise to try its effect on a preceding day since it is not effective in all patients. Intravenous benzedrine sulfate is contraindicated in individuals with cardiovascular disease, especially hypertension.

The dry pack is another aid in the transportation of a disturbed patient. Its application is an art somewhat difficult to describe, but suffice it to say that it is the snug wrapping of a patient in three layers of stout sheets or blankets held in place by blanket pins in such a way that the arms are closely bound to the body and the only movement possible is flexion and extension of the trunk, hips, and knees. This method should be used only if the patient is to be transported in an ambulance. The patient then can be held on the cot by a couple of broad (two feet) canvas belts. A caution should be introduced here. This method is dangerous when there is any suspicion of cardiovascular disease or when the patient is suffering from any organic psychosis such as alcoholism, paresis, arteriosclerosis, or brain tumor. In these disorders sudden death has been known to occur when the patient has been packed.

A physiologic factor which is important when a patient must be transported a considerable distance, especially in hot weather, is dehydration. Many overactive patients do not become quiet long enough to take fluids and their excessive activity produces great fluid and chloride loss, so that the problem of water and salt balance may be very important. The mouth becomes dry, the flora multiply, and all too often the patient arrives at his destination with a severe infection complicating the psychotic condition. Even in the absence of infection the whole metabolism is disturbed, the temperature rises, the pulse accelerates, and the blood pressure falls. Nor is it only in the overactive, excited patient that this occurs. It happens also in the quiet, depressed patient who refuses food and fluids or in the deluded patient who fears poisoning. The solution of this problem is twofold. While awaiting admission and just before being dispatched to the hospital, the patient should be tube fed. If the patient has been tube fed several times in recent days, a volume of twelve hundred cubic centimeters is readily retained. If it is the first food in the stomach for several days, eight hundred cubic centimeters will be all that can be tolerated. It would be better to give eight hundred cubic centimeters which is retained than twelve hundred which is all vomited. To this tube feeding thirty to forty-five grains of sodium chloride should be added. Another method of treating fluid loss is one which can be used while the patient is en route to the hospital, especially if coming in pack and by ambulance. This is the introduction of small pieces of ice into the mouth at frequent intervals. Even if the patient spits or drools the resulting fluid, the mouth is kept moist and the normal mechanisms against infection can function.

Escorts: The patient should be accompanied by a sufficient number of escorts to use any physical force which may be necessary. Often such force can be obviated by the choice of a sympathetic, intelligent relative or friend who knows how to jolly, cajole, or coax the patient to cooperate. In all cases the patient should be accompanied by one or more relatives who can give a good description of the patient's present illness, his previous personality, and history. A knowledge of all these factors is essential in the proper handling of his condition by the hospital physician.

I wish to add one more thought which is not strictly on the subject of this paper: All the foregoing suggestions will be of little value if, after transporting the patient to the hospital, he is turned away because of lack of room or inadequate papers. A definite appointment should be made in advance and the proper legal requirements fulfilled. These requirements are different for psychotic patients than for any other type because the hospital must have the authority to hold the patient against his will. This authority can come only from a judge, and the fact that the patient is paying his own way does not relieve those responsible for him of the burden of obtaining adequate legal papers. So many hospitals have been successfully

sued by patients for illegal detention that this is one piece of "red tape" which is practically never cut.

SUMMARY

This paper discusses the problem of transporting the psychotic patient to the hospital under the following headings: honesty and the psychologic preparation of the patient for hospital care; medical handling of the patient's needs prior to his transportation with reference to sedatives, and salt and fluid balance; and escorts and legal requirements.

THE TREATMENT OF LARGE STASIS ULCERS BY PINCH SKIN GRAFTS*

Edward J. Ringrose, M.D.

Large chronic ulcers of the legs are fairly common and very slow to heal even under ideal conditions. They are usually found on the lower one-third of the legs and are the result of poor nutrition of the tissues due to blood and lymph stasis, together with trauma and infection, all of which lead to tissue sclerosis. Stasis results from varicosities, thrombophlebitis, the scarring following a single or repeated traumatic episode, and local infections. Ulceration often does not immediately follow the acute conditions mentioned, but as a rule is a result of long continued stasis. Once stasis is established, slight injury often produces ulceration which is progressive and the ensuing inflammatory changes and scarring aggravate the condition. If the stasis persists, the ulcer continues to enlarge, often to several inches in diameter. It will not respond well to the usual methods for overcoming stasis, such as bed rest with elevation of the extremities; injection, ligation and excision of veins; elastic bandages with or without rubber sponges; elastic stockings; or Unna's paste boots.

These larger ulcers will eventually heal on bed rest, but this requires weeks or months and the new skin is thin and of such poor quality that it breaks down with further trauma and again progresses. The typical patient has a large chronic ulcer on the lower one-third of his leg, often with a dirty gray, foul-smelling exudate and dermatitis or inflammation about it.

In the past several years we have used the pinch or Reverdin type of graft in the treatment of these ulcers. This has greatly shortened the period of hospitalization and resulted in a much better quality of skin.

*From the Department of Dermatology.

Healthy granulations are essential for successful pinch grafting. These are obtained in from three to ten days by putting the patient to bed and applying continuous cool wet dressings of half saturated boric acid solution, changed once daily. When good granulation tissue is established, cool wet dressings of normal saline are substituted for the boric acid and twenty-four to forty-eight hours later the skin grafting is done.

The following sterile equipment is needed: new razor blades for cutting the grafts, curved needle to pick up the skin for cutting, two mosquito forceps for holding the razor blade and needle, 2 per cent novocain solution, syringe and hypodermic needle for injecting the novocain, one thumb forceps and one straight needle for placing the grafts, a supply of towels, sponges, and normal saline solution.

The anterior thigh is usually chosen as the donor site. (Figure 1). This area is shaved, if necessary, and then painted with tincture of iodine.



Fig. 1. Donor site on anterior thigh.

The latter is as completely removed as possible by multiple spongings with 70 per cent alcohol. The area is then anesthetized by local infiltration with 2 per cent novocain without epinephrine.

By means of a small curved needle held in a mosquito forceps or needle holder, the skin is pricked and held up under tension while a single-edged razor blade, held in another hemostat, is used for cutting off a piece of skin the diameter of a pea, which is placed on a sterile sponge moistened with normal saline solution. These grafts are preferably thin and should not extend into the subcutaneous fat since the latter interferes with the grafts taking. A number of these small pieces of skin are cut and placed on the saline sponge to be transferred by the assistant to the recipient area. The assistant need not scrub since he is not working in a sterile field and has no contact with the donor site. With thumb forceps and a straight needle the grafts are picked up and placed close together but not touching each other on the granulating

bed (Figure 2). At the borders of the ulcer they should not come closer to the margin than one-sixteenth of an inch since epithelium growing in from the edge will then prevent the border grafts from taking (Figure 3).

After the recipient area has been completely covered with grafts, a thick layer of dry sterile gauze sponges is placed over the grafts and wrapped snugly in place with a roller bandage

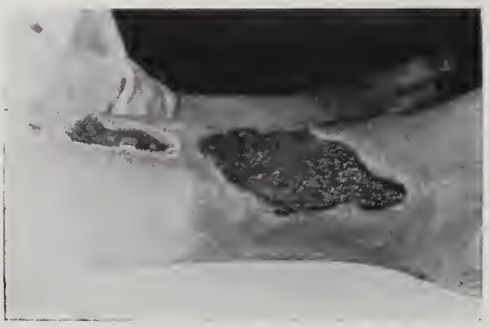


Fig. 2. Granulating ulcer ready for grafting.



Fig. 3. Ulcer with grafts freshly placed.

and adhesive tape. It is then left undisturbed for eight to ten days. There is usually slight serous exudate from the recipient site and a variable amount of odor may develop. These should be disregarded unless accompanied by fever. The purpose of the thick layer of sponges placed over the graft is to absorb the exudate.

The blood on the donor area is sponged away and the latter painted with 3 per cent gentian violet solution. During the first day several applications of gentian violet may be necessary due to the oozing of blood, but thereafter a daily application for three or four days is sufficient. A bandage may be placed over the gentian violet the first day to absorb any oozing but this usually sticks and is difficult to remove the second day so it is better to leave the area uncovered from the start. Bed covers may be kept from contacting the donor site during the first day by a cradle. After this the area is dry and needs no covering.

Between the eighth and tenth day the bandage is cut and removed from the recipient area. It may stick tightly to the graft but there is no danger of pulling the grafts off. If there has been an accumulation of exudate or purulent material, cool wet dressings of boric acid solution may be applied for twenty-four to forty-eight hours. If the grafted area is dry, it may be left alone or covered with a thin layer of petrolatum.

The patient is kept in the hospital for several days after the bandage has been removed and is advised to remain in bed for about two weeks more at home. Before leaving the hospital he is instructed in the application of a cotton elastic bandage beginning at the base of the great toe including all of the heel and extending up to just below the knee. This is to be applied as soon as the patient starts to get up and is to be worn whenever he is on his feet. It is important that a patient wearing an elastic bandage keep the muscles of the feet and legs active by walking or, if sitting, by movements of the ankle every ten to twenty minutes to promote blood flow. Occasionally it may be necessary to control the stasis for a few weeks by use of Unna's paste boots if it is impossible for the patient to remain in bed the usual two weeks or if elastic bandages are not sufficient to prevent edema.

To maintain a cure the stasis must be controlled, and it may be necessary for many of these patients to wear elastic bandages for the remainder of their lives. Some of them, however, may be spared this if stasis can be overcome by saphenous ligation, injection or excision of varicosities, or a combination of these procedures.

By preparing the ulcer for grafting by treatment of the patient in his home and discharging him to his home as soon as the grafts are established, the period of hospitalization may be as little as ten to fourteen days. The grafting may even be done in the office if the patient will cooperate in keeping the leg elevated during his trip to and from the office and at home.

In the past six years twenty-nine patients with large stasis ulcers varying in size from that of a silver dollar to a small dinner plate have been treated by pinch grafting as above described. Of these sixteen have had excellent, 90 to 100 per cent, takes on the recipient area; seven have had good, 75 to 90 per cent, takes; two have had fair, 50 to 75 per cent, takes; one a poor, less than 50 per cent, take; and three have been failures.

The ages of the sixteen patients with excellent takes ranged from thirty-five to eighty-two, the average age being fifty-nine; those of the seven patients with good takes ranged from thirty-nine to seventy-one, the average age being fifty-six:

those of the two with fair takes were forty-nine and fifty-six, that of the poor take was sixty-eight, and those of the failures were twenty-six, forty-nine, and seventy-one.

In the excellent group the duration of the ulcers ranged from six months to twenty years with the average being five years. In the good group the duration ranged from seven months to thirty-five years, with the average being nine years. In the fair group one had had his ulcer six months and the other two and one-half years.

The man with the poor result had had his ulcer three years. Of the three failures, one had had an ulcer two months, one sixteen years, and the other "several" years. The first failure was in an old man seventy-one years of age. The second developed an acute infection in the grafted leg two days postoperatively, necessitating removal of the bandage and with it the grafts. The third failure was in a twenty-six year old feeble-minded boy who had huge ulcers on both legs which dated from the age of ten, at which time he had had bilateral thrombophlebitis of the legs associated with pneumonia. He had hypertrophic granulations which developed hematomas after grafting and from which B hemolytic Streptococcus and hemolytic Staphylococcus aureus were cultured. Partial loss of grafts in a few of the other cases were thought likely to be due to infection with the same organisms.

A brief case history of the patient whose pictures are shown follows:

History: E. C., an obese, white woman thirty-nine years of age, was admitted to the Dermatologic Service of the University Hospitals on January 8, 1941. Her trouble began twenty-four years previously with osteomyelitis of the left tibia, for which she had been operated upon three times. Following these operations the wound did not heal for two years. Since then it had healed over repeatedly only to be reopened by slight trauma. Since the time of the last operation the patient noticed the development of varicose veins. Eight years prior to admittance the patient developed another ulcer, and this had steadily enlarged. She had suffered considerable pain in the region of the ulcer, especially at night.

Examination: Examination revealed large varicosities over the upper posterior aspect of the left leg. A large postoperative scar over the anterior tibial surface extended from just below the tuberosity and ended below in a large weeping ulcer which rapidly broadened out to 8 or 10 centimeters in breadth just above the ankle. The ulcer had sharply defined, raised margins and was moderately deep. The general physical examination was negative.

Course: The patient was placed on bed rest and continuous, cool, half-saturated boric acid dressings were applied to the left leg. Ten days later the granulations were in good condition (Figure 1) and normal saline was substituted for the boric acid. Forty-eight hours later grafting, as described above, was done (Figures 2 and 3). Five days later the recipient area had become malodorous, but was not disturbed. Ten days after grafting, the bandage was removed (Figure 4).

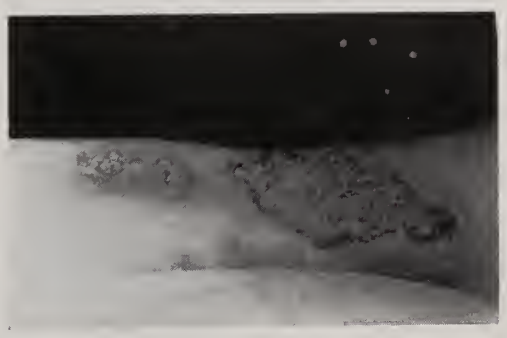


Fig. 4. Appearance when bandage was removed ten days after grafting.

At least 95 per cent of the grafts had taken. Two days later the patient was put on boric acid wet dressings for twenty-four hours so that crusting along the borders of the healed lesion could more easily be removed. Nineteen days after the grafting the patient was instructed in the use of elastic bandages and discharged. Seven weeks after grafting, the patient was seen in the Out



Fig. 5. Appearance seven weeks after grafting.

Clinic (Figure 5). She stated she had had occasional swelling and drainage from one spot in the grafted area. This, however, had healed. Five months after grafting the condition of the graft was still excellent but she had developed several new ulcers of small size in the nearby sclerotic

skin. She was advised to cover these with strips of adhesive tape. A letter a month later stated these ulcers had entirely healed but she had developed some blisters nearby.

CONCLUSIONS

Pinch skin grafting offers a simple, effective means of treating large stasis ulcers. It greatly shortens the period of inactivity of the patient. It results in a much better quality of skin than nonsurgical methods so that recurrences are fewer. It may be adapted to office use. It offers the probability of a high percentage of cures. In a group of twenty-nine patients treated by pinch skin grafts in the past six years, 80 per cent have had good or excellent results.

NEURONITIS*

ADOLPH L. SAHS, M.D.

Neuronitis was described by Osler[1] in 1892 under the heading of "acute febrile polyneuritis." In 1907 Buzzard[2] recorded a number of cases as "acute toxic polyneuritis," and the following year Laurans[3] discussed the occurrence of facial diplegia in the course of "infectious polyneuritis." Publication in 1916 of an article by Guillain, Barré and Strohl[4] stimulated interest and added a new name, the "Guillain-Barré syndrome." Until more information is available regarding etiology, confusion of nomenclature will undoubtedly persist. In referring to this disease I will use the term "neuronitis," because this title is as descriptive as any which has been offered.

The predominant characteristics of neuronitis as described in two patients by Guillain, Barré and Strohl include: motor paralysis, loss of tendon jerks, preservation of cutaneous reflexes, paresthesias with slight disturbance of objective sensibility, tenderness, albuminocytologic dissociation of the spinal fluid and ultimate recovery. In a subsequent communication, Guillain[5] included reports of ten additional patients. He was convinced that the disease was of infectious (virus) origin. Since the report of Guillain, Barré and Strohl, a number of articles on this subject have appeared,[6 to 10] including more recently those by Forster, Brown and Merritt,[11] Roseman and Aring,[12] Sabin and Aring,[13] and Fox and O'Connor.[14] Special mention should be made of the paper by Gilpin, Moersch and Kernohan,[15] who reported a series of thirty-five cases, detailing twenty, and giving pathologic studies in three.

The etiology is not definitely known. The pathologic changes consist principally of degeneration of the myelin of the peripheral nerves and beading of the axis cylinders. The central nervous system shows no unusual changes except for axonal reaction in the anterior horn cells of the spinal cord and the nuclei of the cranial nerves.

In the six-year period since 1937, twenty-five patients with this disorder have been admitted to the University Hospital. A summary of the findings is shown in Table I.

A history of an antecedent infection in the form of the "flu" or gastro-enteritis was elicited from only one-half of the patients. Sometimes it was of such benign nature that the patient failed to mention it until specifically questioned. After a latent period of several days or weeks, the symptoms of polyneuritis occur, usually with an abrupt onset. The extremities become weak, and finally paralyzed, although the pain, tenderness, and muscle spasm are not often severe. In twelve of our patients the facial nerves were involved. The other cranial nerves were affected less frequently. Generally the lower extremities are the first to be involved, the proximal groups of muscles being affected before the distal ones. The deep reflexes are depressed, or become absent, early in the course of the disorder. Sensory changes are likely to be minimal but, if they are present, deep sensibility is involved more often than cutaneous sensibility. Disturbances in vesical and rectal sphincters are occasionally present. Weakness of the trunk muscles probably occurs more often than is recorded, especially in the severe cases. If the intercostal and phrenic nerves are involved, respiratory failure occurs. Seven of our patients developed respiratory embarrassment, a complication which was responsible for the four fatalities in our series.

The majority of patients are afebrile when admitted to the hospital. A rise in pulse rate usually heralds the development of cranial nerve paralysis or of respiratory failure. Studies of the blood yield very little information of positive vaue, although the leukocyte count is occasionally slightly elevated. Urinalyses reveal normal results. The blood serologic reactions are negative in all instances. The characteristic laboratory features of this disorder include an increase in the total protein value of the spinal fluid, with a normal cell count.

Neuronitis must be differentiated from poliomyelitis, other types of polyneuritis, and myasthenia gravis. Neuronitis does not present the seasonal fluctuation in incidence that is so characteristic of poliomyelitis, the paralysis is bilateral and symmetrical, and the spinal fluid cell count is not elevated. Other types of polyneuritis are usually to be distinguished by the greater amount of pain, tenderness and sensory changes, and the

*From the Department of Neurology.

predominantly distal nature of the motor and sensory changes. The absence of spinal fluid changes and the results from the prostigmine test should aid in the differentiation from myasthenia gravis. Encephalomyelitis, multiple sclerosis, cord tumor and disseminated malignant lesions must also be considered in the differential diagnosis.

The prognosis for life depends almost entirely upon the development and severity of bulbar and respiratory difficulties, which appear, if at all, within the first month after onset of symptoms. Once the condition becomes stationary and improvement begins, there is practically no likelihood of relapse. Improvement is usually gradual, the patient requiring months or years for recovery. The deep reflexes are usually the last to return. A few patients, however, do not recover completely.

Treatment is principally supportive. Large doses of vitamins have been administered by us, without favorably influencing the course of the disorder. In those patients with tenderness, analgesics are indicated. Contractures must be prevented by proper physiotherapeutic measures. If respiratory and bulbar paralysis occur, the patient should be placed in a respirator. Tube feedings will often have to be utilized under these circumstances, and nasopharyngeal secretions removed with suction. Care of the bladder and bowels and the avoidance of bedsores are essential in the treatment of those patients who are completely bedridden. We have used a modified Kenny treatment in two recent patients but it is too early to evaluate the results.

The following case reports illustrate the condition under discussion:

CASE REPORT NO. 24

This student, twenty-six years of age, developed an undiagnosed episode of weakness of the thighs in 1939. He was unable to walk for several hours, but was perfectly well within twenty-four hours.

TABLE I

Case No.	Age	Sex	Preceding Illness	Location Initial Symptoms	Cranial Nerves Involved	Respiratory Paralysis	Bladder Disturbance	Deep Reflexes	Sensory Impairment	Tenderness	Spinal Fluid			Condition on Discharge
											Pressure*	Cells**	Total Protein†	
1.	22	F	+	Legs; Arms	7-9-10	+	0	Decreased	0	+	?	1	50	Died in Respirator
2.	62	M	+	Legs	0	0	0	Absent	0	0	65	1	62	Improved
3.	17	F	0	Legs; Arms	0	0	0	Absent	0	0	?	?	?	Improved
4.	61	M	0	Legs	6-7-9	0	+	Absent	+	+	110	3	154	Improved
5.	41	M	+	Legs; Arms	5-7-9	+	+	Absent	+	+	155	3	400	Died in Respirator
6.	3	F	0	Legs	0	0	0	Absent	?	0	200	1	200	Improved
7.	16	M	0	Arms	0	0	0	Absent	0	0	270	4	75	Improved
8.	39	F	0	Legs	7	0	0	Absent	+	0	150	2	196	Improved
9.	25	M	+	Arms	0	0	0	Absent	+	0	170	9	81	Improved
10.	21	F	+	Legs; Arms	2-3	0	0	Absent	+	0	80	28	178	Improved
11.	9	M	+	Legs; Arms	7	+	0	Absent	+	+	120	4	112	Improved
12.	4	F	0	Legs	0	0	0	Absent	?	+	130	1	218	Improved
13.	23	F	0	Arms	7-9-10	+	+	Absent	+	+	110	2	92	Improved
14.	29	F	0	Arms; Legs	2-7	0	0	Absent	+	0	180	3	190	Improved
15.	60	M	0	Legs	0	0	0	Absent	+	0	50	8	190	Improved
16.	5	M	0	Legs	0	0	0	Decreased	0	0	160	6	105	Improved
17.	25	M	+	Legs	7	0	0	Absent	+	+	110	5	316	Improved
18.	21	F	0	Arms; Legs	3-4-6-7-9-10	+	+	Absent	+	+	?	8	58	Died in Respirator
19.	5	F	+	Legs	0	0	0	Absent	?	+	120	4	280	Improved
20.	21	F	+	Legs	3-4-6-7-9-10	+	+	Absent	+	+	185	1	82	Died in Respirator
21.	28	M	+	Arms	7-9	+	+	Absent	+	+	50	3	73	Improved
22.	55	F	+	Legs	0	0	0	Decreased	0	0	170	3	28	Improved
23.	11	M	+	Legs	2-6	0	0	Absent	+	+	350	3	480	Improved
24.	26	M	+	Legs	0	0	0	Absent	0	+	110	4	57	Improved
25.	19	F	+	Legs	7-9	0	0	Absent	0	+	80	2	178	Stationary 2-22-43

*Millimeters of water.
**Per cubic millimeter.
†Milligrams per 100 cubic centimeters.

About December 20, 1942, he developed a mild upper respiratory infection unassociated with fever, which subsided completely within several days. On January 3, 1943, he noticed weakness of his thighs. The weakness of his legs progressed so rapidly that three days later (January 6) he was unable to walk. There was very little tenderness or pain in the involved muscles, and he was aware of no loss of sensation. On admission to the hospital on January 6 the temperature was 98 degrees, pulse 85, and repirations 18. The pupils reacted well to light and responded well in accommodation. The rotations of the eyes were normal and fundus examination showed no abnormalities. The other cranial nerves were intact. The lungs and heart were normal and the blood pressure was 145/70. The strength of the upper extremities was normal and the deep reflexes in the arms were present and active. The abdominal muscles were weak although the reflexes were also present and active. The proximal muscles of the lower extremities, however, were very weak, the estimated strength being 10 per cent of normal. The strength in the distal portions of the lower extremities was good. The deep reflexes were diminished in the legs. The response to plantar stimulation was flexion. Sensory examination was normal throughout.

Examination of the urine and blood showed nothing remarkable. The blood Wassermann reaction was negative. The spinal fluid was under an initial pressure of 110 millimeters of water, was clear and colorless, and contained four small lymphocytes per cubic millimeter. The total protein content, however, was 57 milligrams per 100 cubic centimeters. The spinal fluid Wassermann was negative. Throat cultures showed beta-hemolytic streptococci, but no diphtheria organisms. Physiotherapy was instituted shortly after admission.

The weakness of the legs progressed until the distal as well as the proximal muscles were involved. The patient became aware of a tingling sensation in his hands, the proximal portions of the upper extremities became weak, and the trunk muscles were more involved than formerly. However, he did not experience cranial nerve involvement, respiratory or sphincter difficulties. He reached the worst phase of his illness on January 21, 1943, remained stationary for approximately ten days, and began to improve. At the time of discharge from the hospital on February 21, he was able to take several dozen steps unassisted.

CASE REPORT NO. 21

This man, twenty-eight years of age, was well until July, 1942, when he developed an aching pain in the right lower quadrant of the abdomen. He recovered from this attack, but experienced a similar episode in September, 1942. An appendectory was performed on September 20, under ether anesthesia. On September 27, he suddenly noticed weakness and numbness of both arms, with similar involvement of the legs three days later. The weakness of his extremities progressed almost to complete paralysis. There was tenderness, but no pain in the involved extremities. On October 7 he required catheterization.

On admission to the University Hospital October 23, the temperature was 98.6 degrees, the pulse 120, respirations 24, and the blood pressure 160/120. The pupils were round and equal and reacted well to light and in accommodation. Ocular rotations and fundi were normal. The other cranial nerves, especially the seventh, functioned normally. The neck muscles were strong. The lower intercostal muscles were functioning poorly. Examination of the abdomen showed a well-healed right lower quadrant scar. The strength of the muscles was greatly reduced. The arms were slender, hypotonic and flabby. There was slight tenderness to pressure over the muscles of the upper extremities. No voluntary motion was present in the proximal muscles of the upper extremities; and the strength of the hands was estimated as 25 per cent of normal. The findings in the lower extremities were similar. All of the deep and superficial reflexes were absent except for the Achilles reflex, which was greatly reduced. Sensory examination showed diminution of two point discrimination, vibration and joint sense in the lower extremities. The rectal sphincter tone was diminished. The urine and blood examinations revealed normal findings except for a leukocyte count of 11,700 per cubic millimeter. The blood Wassermann reaction was negative. The spinal fluid was under an initial pressure of 50 millimeters of water, was clear and colorless, and contained 3 lymphocytes per cubic millimeter, and a total protein of 73 milligrams per 100 cubic centimeters. The spinal fluid Wassermann was negative.

On October 28, the patient experienced difficulty in breathing. His respiratory rate rose to 33, and his pulse to 140 per minute. His facial and palatal muscles became paralyzed and it was necessary to place him in a respirator and feed him by tube. Catheterization was also required occasionally. He remained in the respirator continuously for ten days, and intermittently for the next twenty days. After final release from the respirator, physiotherapy was instituted. By the time of his discharge from the hospital on January 23, 1943, the facial and pharyngeal paralyses had disappeared, the respirations were normal, but there remained marked weakness of extremities and

trunk muscles, areflexia, and mild sensory changes in the legs. Because of the severity of his disease, it was felt that many months would be required for maximum improvement to take place, and that the possibilities for complete return of function were slight.

SUMMARY AND CONCLUSIONS

Half of the patients with neuronitis will give a history of a mild infection previous to the onset of the paralysis. This type of polyneuritis is characterized by a rapid onset of weakness, or paralysis of a bilateral and symmetrical type, which often begins in the lower extremities and extends to the arms. There is a rapid loss of deep reflexes, but sensory changes are, by comparison, usually slight. The cranial nerves, especially the seventh, are involved in approximately half of the patients. The spinal fluid shows an increased protein content, without pleocytosis. Severe bulbo-respiratory complications may result in death; they accounted for the four fatalities in our series. The mortality rate is 15 to 20 per cent. Treatment is primarily symptomatic. The duration of the recovery period in those individuals surviving respiratory paralysis is usually measured in months or years.

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SEVERE SYSTEMIC DISEASE OCCURRING SECONDARILY TO STREPTOCOCCAL SKIN INFECTION IN SEVERAL MEMBERS OF THE SAME FAMILY*

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This is the medical saga of seven brothers, ranging in age from five to fifteen years. They, with their parents and two siblings (one ten months old and the other two years), lived in the country in a small, four-room shack. Good food was scarce and the nutritional status of the entire family had suffered badly. During the first week in September, 1942, all the members of the family became infested with scabies. After two or three weeks the excoriated lesions became secondarily infected and large draining pustules developed. Subsequent cultures proved the responsible organism to be beta-hemolytic streptococcus. Seven of the children soon became ill enough to warrant hospitalization. One boy, age eleven, was taken directly to the local hospital where he died during an attack of severe abdominal pain shortly after admission. The cause of his death is not known.

Six of the brothers were brought to the University Hospitals during the second week of October. The youngest of the brothers who arrived at this institution, age five, was the most acutely ill. He displayed all the signs of acute cardiac decompensation. A detailed case report of this patient will be presented. The next youngest, age six, was the least ill. On arrival at the hospital he showed only a mild toxic condition and large draining pustules scattered over the entire body. Each of the other brothers also had the same type and extensive distribution of skin lesions. Three brothers, ages eight, thirteen and fourteen, had, in addition, facial edema and hematuria, which indicated the presence of acute hemorrhagic nephritis. Dyspnea and positive physical findings over the chest of the sixth brother, age nine, prompted a roentgenogram which demonstrated bilateral pleural effusion and a small area of pulmonary consolidation in the right base. This boy also had nephritis with generalized edema.

The lack of history of upper respiratory infections and the absence of inflammation of the pharynx on physical examination made it appear that the various systematic manifestations found in these children must have had their origins in the streptococcal skin infection. Since blood cultures proved to be negative and since there was no history of chills or fever, it also seemed logical

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to explain their nephritis and myocarditis on the basis of toxicity rather than actual septicemia.

Therapy for these children consisted of the application of 5 per cent sulfathiazole ointment to the skin lesions. Sulfanilamide was administered orally to the two more acutely ill patients. After the secondary infection of the skin had been cleared up, it was still necessary to treat the scabies. For this, Danish ointment was used. No other specific treatment was found to be required for any of the children except the five year old, who had cardiac decompensation. His case report is given at this time.

CASE REPORT

History of Present Illness: The patient was well until he developed scabies during the first week in September, 1942. Eight or nine days later the skin lesions began to enlarge and to drain pus. For one week previous to admission the patient noticed swelling of the face and feet. Three days before admission he became extremely short of breath and his temperature became elevated. Sulfonamide therapy was begun at this time and continued, without evident beneficial results, until the patient reached the hospital.

Positive Findings on Physical Examination: The patient was a very dyspneic, acutely ill boy, five years of age, who had marked edema of the face. There was moderate enlargement of the tonsils and slight inflammation of the posterior pharynx. Auscultation and percussion over the chest revealed only the presence of many fine râles over both lung bases posteriorly. Marked enlargement of the heart both to the right and left was found. The heart sounds were clear and strong. The abdomen was moderately distended, and fluid waves and shifting dullness were demonstrated. The liver was palpable five centimeters below the right costal margin in the midclavicular line, and its edge was soft and tender. A moderate degree of pitting edema could be demonstrated over the feet and ankles. The temperature at the time of admission to the hospital was 103 degrees, the pulse rate 140, and the respiratory rate 50.

Laboratory Findings: The urine showed a trace of albumin and a positive Meyer's test for blood. Ten to fifteen red blood cells were found per high power field. The white blood count was 38,000 and the red blood count was 3,000,000. There were 10 grams of hemoglobin. A blood culture showed no growth. Agglutination tests were negative for typhoid fever, undulant fever and tularemia. Beta-hemolytic streptococci were grown in the cultures taken from the skin lesions. A roentgenogram of the chest revealed bilateral pulmonary edema and cardiac enlargement.

Course and Treatment: The patient was immediately placed in an oxygen tent and sulfanilamide started by mouth. Digifolin, one cat unit, was given intravenously, and digitalis, grains 1½, three times a day continued for three days. Digitalis was then reduced to grain ¼ three times a day. Marked improvement in the patient's condition was noted after three days, at which time the respirations and pulse rate were within normal range. The edema subsided and the liver and heart diminished in size. A roentgenogram of the chest after two weeks showed that the lung fields were clear but that the heart was still enlarged to some degree. During the first ten days the skin lesions were treated with sulfathiazole ointment with good results. Danish ointment was then applied for the cure of the scabies. This treatment was also successful, and after three weeks the skin was entirely clear. The patient was then given convalescent care until the hematuria was no longer present. This required six weeks of bed rest. During this period several blood transfusions were given. The patient left the hospital at the end of two months. A roentgenogram at this time still showed slight cardiac enlargement. Restricted activity and close medical observation were advised.

These related cases are of interest from the medical viewpoint because they illustrate an unusual variety of systemic complications developing secondarily to skin infection. They also have considerable social interest. One must assume that the "epidemic" nature of the infection was due not entirely to the virulence of the organism concerned, but was also contributed to in a large measure by the poor nutrition and unsanitary housing of this family. Before the children were allowed to return home after hospitalization, much improvement in the home condition had been effected by the local county authorities. It was deemed advisable, however, to make a foster home placement for the youngest boy, pending further improvements in his own home.

SUMMARY

Seven brothers from a family of eleven members, living under very poor nutritional and housing conditions, developed severe systemic disease secondarily to streptococcal skin infection. One brother died shortly after the onset of his illness. Of the six brothers who entered the University Hospitals, five were found to have nephritis with varying degrees of peripheral edema and serous effusions, and one showed cardiac decompensation due to toxic myocarditis.

A detailed case report of one of the patients is presented.

THE EFFECT OF ACETONE ON THE UPTAKE OF OXYGEN BY MUSCLE STRIPS AND LIVER SLICES*

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The few, available clearance curves show that little fall in blood acetone values occurs in experiments covering a few hours after equilibrium is attained. Three-fourths or more of the acetone injected may be recovered from the expired air and urine in longer experiments. In man, the urinary excretion of acetone continues for three days after the administration of isopropyl alcohol which is convertible in vivo into acetone (Fuller and Hunter[1]). The question of utilization of acetone by the body and, if utilized, to what extent has been considered only recently.

Interpretation and correlation of the accumulating evidence from studies of fat metabolism and ketosis has led to a new and different idea of the subject as previously held (Soskin and Levine[2]). It is now necessary to speak literally of the effect of carbohydrates or ketone production as antiketogenic. The use of this term as applied by Shaffer and others in connection with the ketogenic-antiketogenic ratio actually signified a ketolytic-antiketolytic relationship. Fatty acid was considered to be burned completely only "in the flame of the carbohydrate." If sufficient carbohydrate was not available or not oxidizable, acetoacetic acid, beta-hydroxybutyric acid and acetone accumulated in the tissues. For each 1 or 2 mols of fatty acid, 1 mol of glucose must be burned to avoid ketosis (Shaffer's ratio). One molecule of fatty acid gave rise to one molecule of ketone body (beta-oxidation of Knoop). It is now established that the depancreatized diabetic dog muscle will utilize, together or independently, both glucose and acetoacetic acid, or beta-hydroxybutyric acid and that one molecule of fatty acid may furnish more than one molecule of ketone bodies (multiple alternate oxidation). Earlier findings that the liver is the principal site of the formation of the ketone substances is confirmed and acetoacetic acid is first produced. Ketone bodies are formed in excess when the fat metabolism is enhanced as the result of unavailability of carbohydrate or, more exactly stated, as the result of lowering of the liver glycogen content. Endocrine influence on ketosis is exerted through regulation of the hepatic glycogen as well as by hyperlipemia and infiltration of fat into the liver.

Acetoacetic acid CH_3-CO-CH_2-COOH may be reduced in various tissues to beta-hydroxybutyric acid CH_3-CHOH-CH_2-COOH and the reaction is reversible although not so easily effected. Both substances are excreted by the kidney and concentrated into the urine. Acetone is formed readily from acetoacetic acid in vitro and presumably arises from the decomposition of acetoacetic acid in vivo. Acetone is not concentrated by the kidney, the urine level remaining about that of the blood and being maintained by diffusion as is the case with alcohol (Widmark[3]).

That the greater part of the acetone formed or administered will leave the body through the lungs is evident. Widmark (to whom we owe largely the establishment of the blood alcohol test for intoxication) determined the distribution coefficient of acetone between air and water and between air and beef blood and in man between alveolar air and blood. The last ratio was 1:394-334. Briggs and Shaffer[4] confirmed Widmark's results; for normal fasting subjects and diabetic patients, the coefficient was 1:355 for alveolar air concentration to blood plasma concentration. From data obtained on a dog, Briggs and Shaffer estimated that fifteen times as much acetone was excreted by the lungs as by the kidneys. However, the amount of blood acetone in the blood in clinical ketosis is small, being 3 to 20 milligrams per cent and in a patient with coma 55 milligrams (Marriott), and forms about one-fourth or less of the total blood ketone bodies determined as acetone.

While metabolism of acetone in the living animal has been studied qualitatively by a number of investigators, there have been relatively few quantitative experiments. Schwarz[5] recovered in the breath 76.9 per cent of acetone administered to dogs and rabbits. Hallock, in this laboratory, has found that 75 per cent of intraperitoneally injected acetone was excreted by rats. He used a dosage of 2 milligrams of acetone per gram of body weight. Koehler, Windsor and Hill[6] claim that 10 grams of acetone administered to man disappears very slowly, but nevertheless more rapidly than could be accounted for on the basis of urinary and lung excretion. Koehler and Windsor[7] report that 55 per cent of the acetone (0.75 milligram per gram of body weight) administered intraperitoneally to mice was oxidized in four hours. This represents a utilization of about 10 milligrams per hour per 100 grams of mouse body weight.*

The present paper reports the results of experiments on acetone metabolism in rat muscle and liver slices. An increased oxygen uptake by the

*From the Pathological Chemistry Laboratory.

*Applied to man and correcting for the metabolic rate on the basis of body weight, this figures about 1 gram per hour for the average normal man.

tissues in Warburg manometers is used as an indication of acetone oxidation.

Liver and muscle samples used were removed from freshly killed, unanaesthetized adult rats (weighing 200 grams or more). The liver was sliced by hand with a razor blade. The right semitendinosus muscle was cut into small strips with a fine-pointed scissors. The tissue in each manometer flask weighed from 0.1 to 0.2 grams. These samples were suspended in 3 cubic centimeters of saline solution as prepared by Hastings, Muus and Bessey[8]. Glucose to make 0.2 per cent was added to the medium used in the liver experiments but not in the muscle experiments. Both control and experimental measurements were made in duplicate or triplicate on each rat used. The fluid in the experimental manometers contained 317 milligrams per cent acetone, but there was none in the controls.

Measurements were made in 15 cubic centimeter Warburg flasks, with 0.4 cubic centimeter of 20 per cent potassium hydroxide on rolls of filter paper in the center cups to absorb carbon dioxide. Flasks were gassed with oxygen and the manometers placed in a water bath of 38 degrees centigrade for a fifteen minute equilibration period. Readings were taken after this at ten minute intervals for one hour. Averages of the oxygen absorbed by the muscle and liver in the presence of acetone and by the control slices are given in Table I. Table II shows an analysis of the data from both sets of experiments. An examination of Table II shows that the differences between the average oxygen consumption of the control tissues and those in acetone are less than the standard deviation of measurements within one group. This would seem to indicate that, although the oxygen consumption of tissues in acetone is higher than the controls, the difference statistically can be considered insignificant. In any case there could not have been an increase in respiration greater than 12.6 per cent for the muscle and 11.4 per cent for the liver.

TABLE I
Cubic Millimeters of Oxygen Consumption per gram of Tissue per Hour.
Average Values for Each of the Experiments.

Number	Muscle Acetone	Control	Liver Acetone	Control
1	0.3379	0.3815	0.7147	0.6614
2	0.392	0.408	0.5600	0.4612
3	0.263	0.228	0.7041	0.6895
4	0.260	0.264	0.7023	0.6571
5	0.3961	0.3448	0.6824	0.6135
6	0.4101	0.3717	0.7043	0.6979
7	0.3580	0.3279	0.7281	0.6340
8	0.3611	0.3688	0.6837	0.6920
9	0.3837	0.3111	0.7900	0.6066
10	0.3456	0.4006		
11	0.3122	0.2771		
12	0.2772	0.3099		
13	0.4321	0.3318		
14	0.3169	0.2423		
15	0.4180	0.4050		
16	0.3608	0.3729		
17	0.4647	0.4416		
18	0.3713	0.3314		
19	0.3554	0.2772		

TABLE II
Analysis of Data from Table I.

	Mean mm3. O_2/gm/hr. with acetone	Mean mm3. O_2/gm/hr. without acetone	Difference between means	Standard deviation from acetone mean
Muscle	0.3575	0.3176	0.0399	0.057
Liver	0.7057	0.6332	0.0725	0.0775

CONCLUSION

Liver and muscle tissue have not been shown to oxidize acetone appreciably in vitro at a concentration of 317 milligrams per cent.

Inasmuch as the oxygen consumption with and without acetone was essentially the same for similar tissues from the same rats, this concentration of acetone apparently neither stimulated nor inhibited the tissue respiration.

If acetone is utilized by the tissues, the rate of consumption is slow.

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EXCISION OF THE PATELLA*

Preliminary Report

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Removal of the patella has been described as a worthwhile procedure as far back as 1860, when Putz of Strassbourg practiced its complete extirpation and concluded from his results that the patella was not essential for normal gait. Since that time it had been occasionally reported in the literature as justifiable surgery in the presence of organic disease, such as, tuberculosis, osteomyelitis, and malignancy. However, in 1937, Brooke noted such striking results following excision in thirty cases of simple patellar fracture that he advised using the procedure routinely for all such fractures. He further concluded that the patella was merely a vestigial remains and not only unnecessary for normal motion of the knee joint but a hindrance to complete joint efficiency. His postoperative investigations revealed increased quadriceps power on the side subjected to surgery as compared with the normal. Brooke's report, which included thirty cases in all of whom complete functional recovery ensued, added great im-

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petus to a widespread practice of patellar excision. Publications in the literature are appearing in ever increasing number, but all lack the final criterion for a needed evaluation of the subject due to the relative infancy of the procedure—an adequate follow-up. For the most past, the reports are certainly encouraging, but, like every new remedy in medicine, it immediately became a potential panacea and is being subjected to widespread application until rational surgical indication will eventually prevail. At present, it is being advocated and practiced in the treatment of fractures of all types, osteo-arthritis, recurrent dislocation, suppurative arthrithis as a means of facilitating drainage, and arthrotomies to ensure more adequate exposure. In 1938, Tippett suggested excision of the patella for compound and comminuted fractures, malalignment, osteo-arthritis and recurrent dislocation. He stated that disability and loss of power were slight following removal. He reported six cases, four following fracture and two for osteo-arthritis. Results were favorable in all. Bissel described a case with an excellent recovery of function following excision for an extensively comminuted, patellar fracture associated with damage to femoral condyles and menisci. He stressed the necessity of meticulous suture of lateral expansions of the knee capsule which are almost invariably torn as a consequence of a fracture of the patella. Hov recommended excision in the treatment of fracture since he felt it considerably lessened the period of convalescence and interfered little, if any, with normal function of the knee. His patients were able to resume their previous occupations two to six weeks postoperatively. Marottoli noted complete cure and functional recovery in six cases treated by removal of the patella for recurrent dislocation. He maintains that no comparable results can be offered by the various plastic procedures. He is in complete agreement with Brooke that phylogeny alone accounts for the presence of the patella. Dodd noted practically full functional restoration following removal for fracture in five patients, three of whom were beyond sixty years of age. Ferciot condemned total excision, stating that the patella was a necessary protection for the maintenance of the integrity of the cartilaginous surface of the femur. He noted no complete restoration of function in less than eight to ten weeks, which is still a relatively short time when compared to conservative fracture therapy. He insisted that excision of fragmented portions and suture of the extensor apparatus was adequate.

In a detailed paper on the efficacy of patellar removal in arthritis, Berkheiser mentions certain criteria which should be met prior to surgery. Not before conservative measures fail and the arthritic process is quiescent, does he resort to operative therapy. In eleven arthritic patients, both proliferative and degenerative types, excision of the patella was done with satisfactory results in eight cases and fair results in three. All patients showed increased range of motion and those with bilateral involvement invariably requested a similar procedure on the other side. In a personal communication to Dr. Berkheiser, Lambrinudi mentions the highly satisfactory results he obtained in five arthritic patients treated by patellar excision. Similarly, Brittain wrote advising removal only in patellofemoral arthritis, following his experience in twenty-seven cases, fifteen of which were fractures, ten osteo-arthritis, one recurrent dislocation and one osteomalacia. Wass and Davies reported eight cases of simple transverse fracture treated by total patellectomy. No patient had complete functional recovery and definite weakness of the quadriceps persisted postoperatively in most of the cases. However, judging from results in comparable cases treated by other methods, they feel the procedure is justified in compound or comminuted fractures and in malunion with symptoms suggestive of patellofemoral arthritis. Dobbie and Ryerson treated all patellar fractures requiring open operation by excision and report complete functional return in twenty or twenty-one cases, within a four month postoperative period.

ANATOMIC RELATIONSHIP BETWEEN QUADRICEPS TENDON AND PATELLA

Considerable controversy exists in reference to the relationship between the quadriceps tendon and the patella. Brooke substantiated his belief that the patella was merely a vestigial remains by recalling the studies of both Bernays and Kazzender which revealed that the patella developed behind and independent of the quadriceps tendon. Brooke is convinced there is no anatomic relationship.

This view was shared by Hey-Groves who noted no direct attachment at either the upper or lower pole of the patella after study of several anatomic specimens. These areas were covered with fat and revealed the complete absence of any ligamentous fibers.

We are at present investigating the embryologic and adult anatomy and will report our ultimate conclusions in a subsequent and more detailed paper. However, our findings thus far are suggestive enough to warrant our doubt concerning the accuracy of these previous observations.

Bruce and Walmsley conducted similar studies and were convinced of the intimate relationship between the quadriceps tendon and patella. Ac-

cording to Bardeen, in Morris's Anatomy, the combined tendon of the quadriceps partly inserts into the superior and lateral margins of the patella and partly passes over it, to become continuous with the ligamentum patellae. The latter gains direct attachment into the inferior pole of the patella. Our feeling in the matter is that this viewpoint is probably most correct and we hope to substantiate this by convincing microphotographs in our later publication.

EFFECT ON THE FUNCTIONAL INTEGRITY OF THE KNEE

In addition to Brooke, many others maintained that the patella serves no useful function. These conclusions were based, for the most part, on the complete functional restoration noted postoperatively. In addition, others report normal knee physiology in the presence of congenital absence of the patella.

Lickey first described the lever effect of the patella improving the angle of application of the quadriceps in extension of the knee. Although Brooke calls this merely a theoretic consideration, and despite his demonstration of increased quadriceps power postoperatively, we believe that this is actually so and constitutes a real objection to promiscuous excision of the patella. As a result of our clinical observations and judging from the reports of others, restoration of complete quadriceps extensory power does not invariably ensue, and even when it does it persists long after all other symptomatology has disappeared. Buckling and inability to mount steps are two prevalent and tenacious complaints.

Another possible objection to the procedure might be the subsequent traumatization of the exposed femoral articular surface. Many are aware of this but feel that partial regeneration of the patella, which we shall discuss later, would obviate this possibility. A far more reasonable argument would be the relative frequency and probably greater severity of late patellofemoral arthritis following the orthodox treatment of fractured patella. Philip Wilson and Wass and Davies emphasize the frequency of this late complication. Experimentally, this protective function of the patella has been demonstrated by Bruce and Walmsley who noted sharply localized degenerative changes on the articular aspect of the femur following excision and suggested a friction effect of the quadriceps tendon as the cause. Unfortunately, the procedure is still in its infancy, necessitating a delay in long range clinical observation and evaluation.

TECHNIC AND AFTER-CARE

Whether the transverse or vertical incision is employed, the removal of the patella is relatively simple surgery and will warrant no further description in a preliminary report such as this. However, we should emphasize, as so many others have done before, that meticulous suture of the medial and lateral expansions of the quadriceps tendon is a necessity for complete restoration of muscle integrity postoperatively. In a fracture of the patella these expansions are invariably torn resulting in irregular, ragged edges which should be excised. Anatomic approximation of the tendon should be carefully done and is greatly facilitated by removal of the patella.

Postoperative care is extremely important following any joint surgery and this is particularly true in the knee where contractures and quadriceps weakness are frequent sequelae of prolonged immobilization. Early active mobilization is advised, certainly at the end of the first week or before. Postoperative splinting is optional. Dobbie and Ryerson believe it is unnecessary. Prolonged immobilization, we feel, should be condemned and constitutes the greatest disadvantage of the conservative therapy of the fractured patella where it becomes a necessity.

CLINICAL FINDINGS AND RESULTS

We have excised eight patellae in a series of seven patients, most of which are recent and will require further follow-up before we can draw any accurate conclusions. They include two cases of old fractures, both of which were bilateral; two cases of recurrent dislocation, one of which was bilateral; two cases of osteo-arthritis, primarily localized in the patella; and one case of tuberculosis which became secondarily infected and resulted in necrosis of the entire patella. The ages varied from eighteen to fifty-four years, but the average age was only thirty-one years. The symptomatology varied somewhat, but pain and limitation of motion were relatively constant in all cases. Only one patient with bilateral, recurrent dislocation of the patella, previously untreated, complained of buckling and quadriceps weakness preoperatively. The routine vertical incision was employed in all cases. Surgical findings in all eight knees revealed moderate to advanced degenerative changes in the patellar cartilage and this was readily confirmed by subsequent pathologic study. This is an interesting and informative observation when we consider that three were recurrent dislocations and two were old fractures. Unfortunately, the small number of cases in this series makes us hesitate to comment, but judging from other writings and our own cases of old fracture treated by methods other than excision, it seems we must conclude that late arthritic changes are a rather frequent sequel, particularly in older age groups and in badly comminuted frac-

tures. Our treatment of uncomplicated recurrent dislocation is still confined to the various plastic procedures and our results warrant no change. The two cases subjected to patellar excision were already complicated by obvious clinical and roentgenologic signs of arthritis and treatment was primarily designed to relieve arthritic symptoms. Reports in the literature do not favor routine excision for uncomplicated cases, since dislocation of the extensory apparatus frequently occurs in the absence of the patella (Burrows).

Lengthy postoperative immobilization following any surgery about the knee is a fault we probably share with the vast majority and which we are gradually overcoming. Excluding the one case of tuberculosis, our average period of postoperative splinting was about five weeks. Our last three cases averaged less than three weeks. It seems likely that the restoration of quadriceps power, especially in older age groups, is intimately related with the duration of this immobilization. When overdone, a long, tedious and often discouraging period of physiotherapy must follow. As stated previously, the best available literature suggests active mobilization within the first week and little or no splinting.

Despite our overcautious immobilization, pain, a constant symptom, was relieved in all instances. Stiffness was also a prominent complaint and of five cases having adequate postoperative follow-up, this was greatly improved in four, who had practically a normal range. One patient, who had a severe arthritis, had sixty degrees of motion thirteen months after surgery, which compared unfavorably with the ninety-five degrees noted preoperatively. However, he was fifty-four years of age, had been immobilized for six weeks, and had degenerative changes throughout the knee. His pain was completely relieved. The most persistent symptom in these five knees was weakness of the quadriceps, sometimes associated with buckling and inability to mount steps; in two, it was completely overcome within a four month postoperative period; and of the remaining three cases, in only one was it persistent and troublesome necessitating shortening of the quadriceps. This patient had bilateral recurrent dislocation with buckling of both knees preoperatively. The first patellar excision done resulted in a complete functional recovery and the patient requested a similar procedure for the other knee. All patients had uneventful postoperative courses.

We may conclude from this rather small series that excision of the patella is not a formidable procedure and seems to be of definite benefit in arthritic cases, especially where the pathology is limited to the patellofemoral compartment and where the primary symptomatology is pain and perhaps limitation of motion. We believe, too, that results will be more impressive with a shortening of the period of postoperative splintage and immediate institution of active motion.

Concerning its employment in recurrent dislocation, we fail to detect any advantages over the plastic procedures. When complicated by secondary arthritic changes, however, it seems to be the operation of choice.

Since we have not used patellar excision in any fresh fractures, no comment is forthcoming. The experience of others endorses its use in patellar fractures requiring open operation, particularly in older age groups, since it permits early mobilization of the knee and a shorter period of inactivity.

The procedure does not seem so totally innocuous that we would venture to recommend it for better exposure of the knee joint or to facilitate drainage in suppurative arthritis.

REGENERATION OF THE PATELLA

The intended brevity of this paper will not permit a lengthy discussion of this rather interesting phenomenon. Suffice it to say that osseous foci of regeneration have been described as early as one month postoperatively and have been seen by us within a four month period. We shall describe these findings in detail in a more complete report when sufficient time has elapsed for a more accurate evaluation of its clinical significance. It is the opinion of some that this regeneration proves the functional necessity of the patella and serves to protect the exposed femoral articular surface. The extent of regeneration varies from barely visible osseous flakes to large osteocartilaginous masses. Complete regeneration from a morphologic standpoint, as far as we can determine, never occurs.

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STATE DEPARTMENT OF HEALTH

Walter L. Bierring

Seventeenth Annual Meeting of Iowa Public Health Association April 27 and 28, 1943, Hotel Kirkwood, Des Moines, Iowa

The Seventeenth Annual Meeting of the Iowa Public Health Association will be held Tuesday, April 27, 1943, at Hotel Kirkwood in Des Moines. Guest speakers who have been secured are Robert Hughes Parry, M.D., Medical Officer of Health, Bristol, England, and Felix J. Underwood, M.D., President-Elect of the American Public Health Association and Executive Officer, Mississippi State Department of Health. Other speakers are Walter C. Alvarez, M.D., Professor of Medicine, Mayo Clinic, Rochester, Minnesota, H. A. Whitaker, Director, Division of Sanitation, Minnesota State Department of Health, Byron J. Olson, M.D., Passed Assistant Surgeon, United States Public Health Service, Helen S. Jordan, Consultant on Day Care, Iowa State Department of Social Welfare, and Robert L. Jackson, M.D., Department of Pediatrics, University of Iowa College of Medicine.

Some Wartime Public Health Problems will be the subject of the address by Dr. Parry, who is conducting a speaking tour of the United States under the auspices of the British Government. Dr. Underwood, a national leader in the field of public health, will be the guest speaker at the noon luncheon meeting of the State Organization for Public Health Nursing. A special feature on Wednesday, April 28, will be an Institute on Orthopedic Nursing, sponsored by the State Crippled Children's Service, University of Iowa.

A cordial invitation is extended to local health officers, physicians, nurses, and health workers to attend this important, wartime meeting of the Association. Speakers, subjects, and other details of the program follow:

TUESDAY—April 27

MORNING SESSION—10:00 a. m.

Presiding—Bertha Harvey, R.N., Davenport, President-Elect, Iowa Public Health Association, and Director, Davenport Visiting Nurses' Association.

Welcome—Hon. John MacVicar, Mayor of Des Moines.

"Nutrition"—Evelyn Hollen, Nutritionist, Iowa State Department of Health.

"Report of the Field Study and Lung Calcification in Iowa"—Byron J. Olson, M.D., Passed Assistant Surgeon, National Institute of Health, Bethesda, Maryland.

"Rheumatic Fever in Children"—Robert L. Jackson, M.D., Pediatrist, State Crippled Children's Service, State University of Iowa.

"Day Care of Children of Working Mothers"—Helen S. Jordan, Consultant on Day Care, Iowa State Department of Social Welfare.

SPECIAL LUNCHEON—12:15 p. m.

Sponsored by the State Organization for Public Health Nursing.

Presiding—Adah L. Hershey, R.N., President, State Organization for Public Health Nursing, and Director, Des Moines Public Health Nursing Association.

Speaker—Felix J. Underwood, M.D., Member, Board of Directors, National Organization for Public Health Nursing.

AFTERNOON SESSION—2:00 p. m.

Presiding—R. M. Sorensen, M.D., President, Iowa Public Health Association.

"Industrial Nursing"—Eva Woerth, R.N., Assistant Director, Division of Public Health Nursing, Iowa State Department of Health.

"Some Problems in Sanitation"—H. A. Whitaker, Director, Division of Sanitation, Minnesota State Department of Health.

"Problems of Constitutionally Frail People"—Walter C. Alvarez, M.D., Professor of Medicine, Mayo Clinic, Rochester, Minnesota.

"Public Health Today"—Felix J. Underwood, M.D., Executive Officer, Mississippi State Board of Health and President-Elect, American Public Health Association.

EVENING SESSION

Annual Dinner—6:30 p. m.

Presiding—R. M. Sorensen, M.D., President, Surgeon, United States Public Health Service and Director, Venereal Disease, Kansas State Department of Health.

Greetings—Hon. B. B. Hickenlooper, Governor of Iowa.

Welcome—Walter L. Bierring, M.D., Commissioner, Iowa State Department of Health.

Response—Felix J. Underwood, M.D., President-Elect, American Public Health Association.

"Some Wartime Public Health Problems"—Professor Robert Hughes Parry, M.D., Medical Officer of Health, Bristol, England.

WEDNESDAY—April 28

Institute on Orthopedic Nursing

Sponsored by the State Crippled Children's Service, State University of Iowa, Iowa City.

Meetings begin 9:30 a.m. and 2:00 p. m.

SERUM-PLASMA CENTER PREPARED TO PROCESS PLASMA

With the addition of another centrifuge of bleeding bottles and accessory supplies, the Serum-Plasma Center of the State Department of Health announces readiness to cooperate with participating hospitals of Iowa in the preparation of pooled plasma.

Under date of February 17, 1943, a letter from the office of the State Health Commissioner was forwarded to superintendents of many of the hospitals in Iowa, outlining a plan whereby the Serum-Plasma Center will receive citrated blood from hospitals, prepare plasma, and return the finished product to hospitals that participate in this work.

The Department's Serum-Plasma Center cooperates in the procurement and distribution of pooled normal human plasma and serum with the Emergency Medical Service of the Office of Civilian Defense, with hospitals that maintain a blood plasma bank, and with organizations and groups which sponsor blood donor programs.

The Office of Civilian Defense, Washington, D. C., has made grants-in-aid to a limited number of hospitals located in vulnerable (for the most part coastal) areas and which have a capacity of 200 or more beds. Such hospitals are expected to have on hand for war emergency needs as many 250 cubic centimeter units of plasma as there are hospital beds. With few exceptions, hospitals in Iowa must depend upon alternative methods for obtaining blood substitutes like plasma and serum. Although essential equipment, including an electric centrifuge, may have been ordered, immediate delivery is impossible due to priority regulations of the War Production Board.

The plan of cooperation is presented as follows:

1. It is assumed that a participating hospital is equipped with bleeding bottles and necessary administration accessories to collect citrated blood and to complete requirements for immediate blood transfusions. Such bottles and accessory articles may be used in the proposed cooperative project provided that they conform with the standards of the National Research Council as outlined in the Manual on Plasma Preparation issued by the Office of Civilian Defense.

2. A staff physician may collect from four to eight 500 cubic centimeter bottles of citrated blood from local donors and forward the blood immediately, express prepaid, to the Serum-Plasma Center, State Department of Health, Des Moines, Iowa.

3. When the blood-filled containers are received, the plasma will be separated, subjected to serologic and bacteriologic tests in accordance with regulations of the Biologics Division of the United States Public Health Service and of the National Research Council's Sub-Committee on Blood Substitutes, and pooled into an approved type of dispensing flask.

4. After preparation, pooled plasma-filled bottles will be returned, transportation charges collect, to each hospital, for storage at room temperature (or in the frozen state), until time of use.

5. Until further notice, the actual cost to a participating hospital will be $3.50 for each 250 cubic centimeter unit of plasma prepared from bottles of citrated blood.

6. The number of bloods collected, as well as the amount of plasma processed, will rest entirely with the hospital administrator and staff; likewise, the number of units of plasma to be reserved for civilian emergency needs.

7. The purpose of the Department's Serum-Plasma Center is to offer its facilities to hospitals which desire to secure at minimum cost safe, sterile plasma adequate for their needs.

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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DENNIS H. KELLY, Associate Editor.....Des Moines

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OFFICE OF PUBLICATION, DES MOINES, IOWA

Vol. XXXIII APRIL, 1943 No. 4

THE COLLEGE OF MEDICINE AT IOWA CITY

The natural pride any physician has for his alma mater is present and enhanced in those physicians who claim "Iowa" as their "school." The State University of Iowa College of Medicine is not old, in comparison with many European colleges or even with a few of the eastern schools of medicine, but in its years of existence it has forged a name for itself which compares favorably with these older schools.

The presence of outstanding teachers at the University has always been a criterion by which the physicians all over the country have judged the worth of the College. Many of these teachers at Iowa have had national reputations, and in a few these reputations have spread beyond the borders of our country. While it is true that an occasional good doctor may develop in spite of poor schooling, it is much more to be expected that outstanding men will result from thorough schooling by outstanding teachers. The teachers at Iowa have not had to apologize for their abilities. Their activities, in most cases, have not been confined to their pure teaching duties but have included clinical investigations of many sorts, as well as pursuit of research problems.

Another criterion by which the College must expect to be judged, is the worth of its graduates. Iowa has always had a rather restricted number of students, and perhaps the intimate association of its students and teachers has resulted in a better appreciation of medical problems by those students than might have been the case had a larger attendance been allowed. Graduates of Iowa have practiced in every state in the Union. In many instances Iowa graduates in a distant state have been consulted by visitors because the reputation of the College had apparently been a kind of assurance to the patient concerning the integrity of the physician.

The people of the state of Iowa have been increasingly appreciative of the actual worth, as well as the potentialities, of the College. When, because of the past record of the College, the Rockefeller Foundation offered a large sum of money to improve the physical plant of the school, the people, through their legislature, were not slow in granting a similar sum in order that the presented plan might become an actuality. Thus, new buildings and facilities, including the beautiful University Hospital, were completed. The advantages of these facilities are increasingly evident



The State University of Iowa Hospital

to the people of the state through their usage, not only by the crippled children, to whom the facilities were first offered, but also by all types and kinds of people in need of medical care.

Now, with the present problems of war, the College is again rising to the challenge. Many of the teaching staff have enlisted in the medical services of the armed forces. The College, under the restriction of reduction in personnel but without any reduction in the number of problems to face, is "carrying on." It is meriting the continued appreciation of all the citizens of the state.

It is, therefore, with a great deal of satisfaction that the Journal publishes this special "Iowa City" number. We are sure it will be a source of pride and profit to the many alumni, particularly to those who are in the military services away from home, some of whom are already in foreign lands. If this were its only purpose, it would be enough. But for those of our readers who are not alumni we are confident the wealth of scientific material presented from the various departments of the College will be most valuable indeed.

PROPOSAL FOR INCREASE IN BENEFITS UNDER HOSPITAL SERVICE, INC.

Coming up for consideration by the next House of Delegates will be the question of whether or not Iowa hospitals affiliated with Hospital Service, Inc. (a member of the Blue Cross Plan), should adopt the proposed comprehensive contract with uniform benefits. This plan is one to provide uniform benefits available to all Blue Cross Plan members. Proposed additional benefits at a slight increase in cost include pathologic laboratory service, electrocardiograms, basal metabolism examinations, x-ray examinations, and anesthesias. Monetary limits would be made for anesthesia and x-ray service similar to those which now exist on laboratory and drug service.

Hospital Service, Inc., has proved itself to be an effective, outstanding organization. Its growth has been rapid, yet sound, and it now has total assets of over one hundred and forty thousand dollars. It is to this organization's credit that it has deferred action on the proposed contract until a definite opinion could be obtained from the medical profession. Many pathologists of the state believe that this contract really means the beginning of plans for hospitals to sell medical care. We are informed that each delegate and member of the House will receive detailed information concerning these changes before the House convenes in order that the proposal may receive the careful consideration its importance to all Iowa physicians warrants.

MEDICINE'S RESPONSIBILITY IN MEETING ITS PROBLEMS

We are publishing in its entirety the following paper delivered by Alfred W. Adson, M.D., of Rochester, Minnesota, before the National Conference on Medical Service in Chicago on February 14.

In the opinion of the Journal this is one of the clearest, sanest, and most promising statements which have been issued to the medical profession concerning the situation in which medical practice finds itself today. It should be read and reread by every doctor of medicine. Everyone knows that all sorts of schemes are in the air, awaiting only the postwar period, for attempts to be made to modify the course of medicine according to this or that political group. While changes are inevitable and probably are essential to meet changing conditions in our social and economic structure, yet who is in a better position to say what those changes should be than the doctors themselves?

It is our understanding that certain resolutions based upon the material in Dr. Adson's address will be presented before the House of Delegates for its consideration at the forthcoming session of the Iowa State Medical Society. It is especially important that all delegates be familiar with what Dr. Adson has said.

THE DOCTOR OF MEDICINE AND HIS RESPONSIBILITY

Members of the North Central Medical Conference, representing the states of North Dakota, South Dakota, Minnesota, Wisconsin, Nebraska and Iowa, have entrusted me with the responsibility of addressing this National Conference on Medical Service concerning medical problems that are of both local and national interest.

It is the duty of every doctor of medicine to prevent illness, to supply adequate medical care to those who are ill, to perpetuate the science of medicine and to encourage medical investigation. It is true that the average physician would prefer to go unregimented among his sick and administer to their needs, irrespective of race, color, creed, or financial status, rather than busy himself with administrative and political problems. However, since the courts have ruled that group health is a business and have found that medical societies are guilty of restraining trade when attempting to maintain the standards of the practice of medicine, a challenge has been issued to the medical profession: Is there a necessity for lay groups and the Federal Government to take over the control of the practice of medicine?

Has the science of medicine reached its zenith? Have the men and women of medicine become so decadent that they are unable to assume their responsibilities? Are the doctors of medicine no longer able to conduct their practice without government control? Do they lack ability to appreciate their problems? Or are they incapable of constructive leadership in the solution of the numerous responsibilities that are confronting the medical profession today? The reply is "No."

The science of medicine has been nurtured by men and women who have advanced the knowledge of relieving pain, correcting deformities, lowering infant mortality, prolonging life and preventing illness by sanitary and public health measures. This progress must continue if civilization is to survive.

The medical profession is conscious of social and economic changes and stands ready to cooperate with, and offer leadership to, state and federal agencies in the solution of medical problems. It further believes that better medical service can be rendered by offering advice and leadership to welfare agencies than by serving as a tool under political bureaus.

The medical profession recognizes the necessity of state and federal control of communicable diseases and medical services to inmates of state and federal institutions. It appreciates its responsibility to the armed forces and expects to supply the needed personnel. It is willing to cooperate with welfare agencies in providing adequate medical care for the low income and indigent groups of the population; but in providing this care, it believes that the medical service is augmented when the patient-physician relationship can be maintained by permitting the patient, whenever possible, to choose his own physician. In order to protect the public from worthless, so-called medical procedures and unnecessary operations by unscrupulous individuals, it likewise believes that high standards of medical education and practice must be maintained. This applies not only to the practice of medicine in the office; it applies to the practice of medicine in the humble home or in the most modern hospital.

Although medical education begins in the medical school, it is never completed as long as the physician continues his practice. Medical schools have adopted standards of education and have required certain courses of study in order that the public might avail itself of the best practices of medicine. Medical licensing boards have further protected the public by requiring of their candidates for licensure prescribed courses of study. State laws governing the practice of medicine and conduct of physicians further protect the public from irregular practices and charlatans.

Medical societies—county, state and national—have been organized to further the education of the physician by acquainting him with the advances and new discoveries in the science of medicine. They likewise serve as administrative units in the consideration and solution of medical problems. It is obvious that the responsibilities of the respective state organizations are greater than those of the county organizations, and that the national organization is charged with greater responsibilities than those of the state organizations. However, it is also obvious that the activities of all groups must be integrated if medical problems are to be solved effectively. In some states, such as Minnesota, the administrative and the legislative bodies have the confidence of the medical profession. Likewise the medical profession has the confidence of the state administrative and legislative bodies. This confidence has made it possible for representatives of both groups to attack and solve the medical problems which are of mutual interest.

The national organization, through its respective bodies and committees, has conducted an excellent program in furthering medical education. It has crystallized the standards of medical education for the medical student as well as for the practitioner of medicine; it has investigated the claims of new and nonofficial remedies, foods and therapeutic measures and has further protected the public by approval or disapproval of the articles investigated. It has taken active steps through its Procurement and Assignment Committee in providing medical men for the armed forces without robbing communities of adequate medical personnel and has made provisions for relocation of physicians where more medical service is needed. It has acquainted the public with the important role that the science of medicine plays in their daily lives, but apparently it has not gained the confidence of the national administrative and legislative bodies that some of the state medical societies have attained. The National Physicians' Committee has made some progress in acquainting the public with the necessity of medical science, but it too had not obtained the confidence of the national administrative and legislative branches of our government. Therefore, the recent court decision has emphasized the weakness of conducting a program of education to acquaint the public, the administrative and legislative bodies of certain states, and the national institutions with the important function of the science of medicine in our civilization. It is our duty, as physicians and citizens, to assure those in administrative positions and legislative bodies that we are familiar with the social and economic changes that have thrown greater responsibilities on the medical profession and that we stand ready to co-operate with these agencies in offering leadership in the solution of the numerous problems which nonmedical personnel are trying to solve.

The chief medical problem that concerns doctors of medicine and welfare agencies is that of providing adequate medical care to those who are financially unable to procure this care. This group includes those who are indigent and those with low incomes. Medical care, in its true sense, embraces more than emergency treatment for a particular illness, since it should include a rehabilitation program, such as the correction of deformities and ailments that impair the efficiency of individuals. The rehabilitation program also should include adequate and proper diets, physical training, recreation, protective clothing and housing. In most of the cities the indigent are provided with proper medical care through the charity hospitals, where competent physicians give of their services. This same group in the rural districts is not always so fortunate, since local welfare boards are reluctant to provide this care. It is in these situations that the physicians have been overburdened in assuming all of the responsibilities in providing the necessary medical care. Prior to the more recent economic changes, physicians were willing to assume this obligation because those who could afford to pay for professional services attempted to meet their obligations. However, as a result of the recent social and economic changes, the government has taken over more and more control of civilians' activities, and those with moderate and low incomes have been less willing to assume their obligations of medical care and are insisting that it is the government's duty to provide medical care and that it is the individual's privilege to squander his extra change.

The problems of this group cannot be solved by physicians alone or by federal, state and local welfare agencies alone. Ours is a joint responsibility. Conscientious leadership by physicians working in cooperation with county, state and federal agencies can and will bring forth a solution of the problem. Medical service must be rendered, and the physician is willing to give a good portion of his services. But the government must provide reasonable funds for the care of its indigent, as it must provide for catastrophic illness in the low income group. Nevertheless, those who come within the low income group should likewise be made to realize that they too owe a responsibility to their local, state and federal governments and should be encouraged and advised in budgeting their income and expense.

Industrial compensation has accomplished much in providing proper medical care and the necessities of life, during illness, for those employed in industrial institutions. However, there still remains a large group of individuals who receive moderate or low incomes and are desirous of securing the assurance of adequate medical service in the event of illness. Insurance companies have offered this protection through policies covering accident and illness disabilities, but again this protection only partially solves the problem, since many an insuree expects more for his premium than the insurer is able to give. In several states medical societies have attempted to develop medical service plans whereby the insuree may purchase from the doctors within the group full medical protection or medical protection for unexpected, serious illnesses. In some states under the farm security program, experimental medical service plans are being tested out by use in an attempt to find the solution of the problem of supplying medical care to the farmers and their families who are being rehabilitated. In some instances physicians are hired to render medical care to indigent and co-operative groups. Even though physicians, welfare agencies and low income groups are struggling with the problems of medical service plans, as yet a satisfactory plan for all classes has not been developed. The recipients expect more than the vendors can supply for the premiums paid.

These controversies give rise to discussions on the necessity of compulsory medical insurance. Should such a program evolve, results would be disappointing from the patient's as well as the physician's point of view if placed under the control of political bureaus, and the patient would be deprived of his free choice of physician.

Therefore, we as physicians believe that a more equitable solution of the perplexing medical problems referred to will be reached if we are permitted to consult and advise administrative officials, legislative bodies, and welfare agencies, since we are more familiar with the medical needs of our respective communities than are those who have a casual knowledge of the medical necessities.

It is befitting to quote the statement found in the opinion written by Justice Miller, of the United States Court of Appeals, of the District of Columbia, in the case of the United States of America versus the American Medical Association, and the case of the United States of America versus the Medical Society of the District of Columbia. The italics are mine.

"It may be regrettable that Congress chose to take over in the Sherman Act the common law concept of trade, at least to the extent of including therein the practice of medicine. Developments which have taken place during recent decades in the building up of standards of professional education and licensure, together with self-imposed standards of discipline and professional ethics, have, in the belief of many persons, resulted in substantial differences between professional practices and the generally accepted methods of trade and business. As we pointed out in our earlier decision, the American Medical Association and other local medical associations have undoubtedly made a profound contribution to this development. *However, our task is not to legislate or declare policy in such matters, but rather, to interpret and apply standards and policies which have been declared by the legislature. That Congress did use the common law test there is no doubt. That Congress was not otherwise advised was perhaps because of the failure of the professional groups to insist upon the distinction and to secure its legislative recognition.*"

Does the medical profession of this country need a stronger invitation, or a more direct challenge to take an intelligent, helpful and fair stand in the enactment of legislation that not only concerns the public welfare but the welfare of medicine itself? Does not the medical profession of this country, as citizens and taxpayers, have a right to express its opinion in these matters before legislation is enacted and rules and regulations adopted by some bureau? I do not share the opinion that the time for the medical profession to speak up is after such things have taken place. Neither do I have the opinion that Congress would be resentful of intelligent, courageous and fair advice on such matters. What better proof can be asked than the quotation from Justice Miller's opinion that the Court is not responsible for the absence of advice from the medical profession when Congress is drafting a law.

It is not the purpose of this paper to criticize the efforts of our national medical organization nor to criticize the efforts of the National Physicians' Committee, but it is the desire of the members of the North Central Medical Conference to express a wish that a more active program be conducted to acquaint the public, government officials, and legislative bodies with the necessity of medical science and the important role it plays in our civilization. It is essential that we as physicians dispel the fear that government administrative agencies and legislative bodies have of our medical organizations and that they be assured of our co-operation in solving the social and economic problems that confront us as a nation.

The functions of acquainting the public on matters of medical interest, assisting bureaus in formulating plans on medical care and offering constructive advice on proposed medical legislation rightfully belong to the national organization known as the American Medical Association. They could be assigned to the National Physicians' Committee, or they might even be undertaken by unifying the activities of the various state committees on public policy and legislation. Representative committees could be appointed for each of the component societies—county, state, and national. These could all be so integrated that national opinion and advice could be obtained and made available for committee hearings on legislation within a few hours' time. Through the national, state, and county committees the entire profession could be informed of proposed medical legislation. Thus, the local constituents of the respective state and federal legislators could express their views before legislation is enacted. Some states already have medical advisory committees from each county. They also have state medical committees on public policy with a physician as part-time executive chairman assisted by legal counsel. A national committee constructed on the same plan as these state committees would have to be created. A physician who has practiced medicine should be chosen as the executive chairman. Both he and his legal counsel would need to be stationed in our national capital. The expense of the national committee on public policy could be financed by one of three agencies—the American Medical Association, the National Physicians' Committee, or the respective state organizations bearing the expense jointly. It would appear

more equitable if each physician would be assessed each year for the specific purpose of maintaining a national committee on public policy and legislation.

Our problems are not unlike those of dentists and hospital associations. Therefore, unified effort of medical, dental and hospital associations should further the welfare of the patient.

ARMY'S 1943 RECRUITING PROGRAM WILL REQUIRE 6,900 PHYSICIANS

The 1943 recruiting program of the Surgeon General of the Army calls for the commissioning of 6,900 physicians and approximately 3,000 hospital interns and residents, it is reported in *The Journal of the American Medical Association* for March 13 in an outline of the new procedure of processing physicians, dentists and veterinarians for the Army. The program also calls for the commissioning of 4,800 dentists and 900 veterinarians.

Physicians will be procured from the following twenty states and the District of Columbia: California, Colorado, Connecticut, Illinois, Iowa, Maryland, Massachusetts, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont and Wisconsin.

The following states have already contributed more physicians to the armed forces than the sum of their 1942 and 1943 quotas and will not be called on to furnish any more physicians, except interns and residents and except special cases for specific position vacancies, during 1943: Alabama, Arizona, Delaware, Georgia, Idaho, Kentucky, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Tennessee, Texas, West Virginia and Wyoming.

It is stated that at present there will be no procurement of physicians, except interns and residents and in special cases for specific position vacancies, in those states not listed above. There will be no procurement of dentists, except special cases for specific position vacancies, in the following sixteen states: Alabama, Arizona, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Mississippi, New Mexico, North Carolina, Oklahoma, South Carolina, Tennessee, Texas and Virginia.

At the present time there are no restrictions on the recruiting of veterinarians.

In the instructions issued by the Army it is pointed out that the Surgeon General has discontinued all medical officer recruiting boards and that under the new procurement program no physician, dentist or veterinarian will be commissioned in the armed forces of the United States until he has been declared "available" by the Procurement and Assignment Service of the War Manpower Commission.

In each state the Procurement and Assignment Service has set up three state chairmen: medical, dental and veterinary. Each of these prepares a monthly quota list of physicians, dentists and veterinarians who are apparently suitable and who are available for commissioning in the Army of the United States. This list is submitted to the central office of the Procurement and Assignment Service which sends a communication inviting such individuals to apply for service with the armed forces. On the reply card enclosed with the invitation the individual states his preference for the Army, Navy or Medical Department of the Air Forces. These reply cards are sent by the potential applicants to the state chairmen of the Procurement and Assignment Service who in turn submit lists of such potential applicants to the Officer Procurement Service of the Army.

On receipt of such lists the officer procurement district office contacts the potential applicant and arranges for an interview regarding a commission.

Applicants will be requested by the officer procurement district office to complete all papers and take all steps required of them within fourteen days of the date of such request. If this is not complied with, a report thereon will be transmitted by the officer procurement district office to the state chairman of the Procurement and Assignment Service.

The decision as to the grade and appointment to be recommended for each candidate rests with the Surgeon General, not with the Officer Procurement Service.

BEHIND THE DOCTOR

C. C. Little, D.Sc., Managing Director
American Society for the Control of Cancer

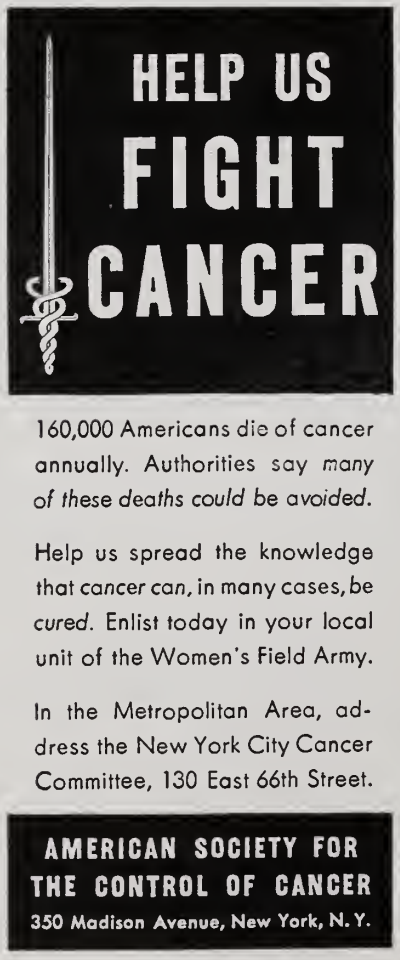
In any Democracy the forces which stand behind the doctor are quite as important as the training and ability of the doctor himself. Among the public health movements in the United States no group has recognized this basic principle more promptly or more completely than the American Society for the Control of Cancer in conducting its nationwide educational campaign against that disease.

In 1936 the Society organized as a practical working unit of lay people what it called the Women's Field Army Against Cancer. From the very outset it was specified that this group of lay workers in the educational field should be guided by governing bodies, the majority of whose members should be medical men or women. The Society and the Field Army thus definitely committed itself to a policy of standing back of the doctor in the fight against cancer.

The wisdom of this attitude has been amply proved. Today doctors all over the United States

report a constantly increasing flow of early cancer cases to their offices for diagnosis and treatment. Since the prospect of cure of cancer is directly related to the observation and treatment of the disease in its early stages, this evidence of practical value of the Women's Field Army work has convinced the medical organizations of counties and states throughout the Union that real progress can be made in the conquest of the disease.

The mutual benefits to both the patient and the profession have been great. Either group by itself



could never be as strong or effective as in close cooperation with the other. Mutual confidence and respect lead to a development of the best qualities of both groups. This sort of progress will count heavily in determining the progressive advance against this disease in the years to come. We are on our way toward cancer control and both the doctor and the prospective patient can face the future certain that sympathy and understanding will continue to decrease the possibility of conflict and obstruction in the drive toward final victory.

WAR SESSIONS OF THE AMERICAN COLLEGE OF SURGEONS

New developments in military and civilian medical and hospital service are being brought to members of the medical profession at large, and hospital representatives, through a series of twenty War Sessions, which began March 1 and which are being held throughout the United States under the sponsorship of the American College of Surgeons with the cooperation of other medical organizations and of the Federal medical services.

The Nebraska-Iowa Session will be held in Omaha Saturday, April 3, at the Fontenelle Hotel. It will consist of an all-day program, lasting from 9:00 a. m. to 10:00 p. m., including luncheon and dinner conferences. There will be eight meetings in the session, four of which will be for the entire assembly and the remainder divided into two meetings each for physicians and for hospital representatives. Nationally known representatives of the Army of the United States, the United States Navy, the United States Office of Civilian Defense, the United States Procurement and Assignment Service, and the United States Public Health Service, will address the meetings and will lead discussions, in addition to participation by prominent leaders in civilian medical practice and hospital service.

Topics to be discussed relating to military medicine will include care of the ill and injured in combat zones and after evacuation. The newer types of injuries encountered in this war, such as crush and blast injuries, will be especially considered, together with prevention and treatment of infections, and treatment of burns, shock, and injuries to specific parts of the body. Anesthesia, plastic surgery, and the psychoneuroses of war will be some of the other topics. Problems of civilian medical care in wartime which will be discussed will include the responsibilities of individual doctors and hospitals; personnel problems of hospitals; organization of emergency medical services; maintaining adequate supplies, furnishings, and equipment; maintenance of high standards of medical and nursing education, and of hospital service in general; hospital public relations, and administrative adjustments in professional staffs of hospitals. The opening meeting of the session will be devoted to a discussion of The Rôle of Emergency Medical Service in Gas Defense, and the closing meeting will be a panel discussion on Civilian Medical Practice and Administrative Adjustments in Professional Staffs of Hospitals in Wartime. Some of the topics for consideration at the latter meeting will be endemic and epidemic diseases, including tropical diseases; medical services in industry; medical and surgical practice; and supplementary postgraduate education for medical officers and civilian doctors.

THE 1943 CONFERENCE OF THE IOWA ASSOCIATION FOR SOCIAL WELFARE

The Forty-third Conference of the Iowa Association for Social Welfare will be held in Des Moines April 9 and 10 at the Hotel Fort Des Moines. The program of the Community Health Section will be of particular interest to all physicians. A cordial invitation is extended to those interested in the sessions and guest privileges will be given the physicians attending.

Program of the Community Health Section
Friday Morning, April 9
9:30-11:30
Panel Discussions

Chairman, Channing G. Smith, M.D.,
Medical Advisor, Department of Social Welfare,
State of Iowa

Providing Medical Care in a Changing Social and Economic Era
Felix A. Hennessy, M.D., Calmar, Past President of Iowa State Medical Society.

Medical Care Program in a Rural Area
Clyde A. Boice, M.D., Medical Consultant, Washington County Health Unit.

Medical Care Program in an Urban Area
Arnold M. Smythe, M.D., Des Moines Health Center.

Friday Afternoon, April 9
2:30-4:30

Chairman, Theodore J. Greteman, M.D.,
Assistant Director, State Services for Crippled Children, Children's Hospital,
University of Iowa

Mechanization of Medical Care
Arthur Steindler, M.D., Professor and Head of Department of Orthopedic Surgery, University of Iowa.

Remedial Education Problems and Services
Dr. C. R. Strother, Director, Speech and Reading Clinics, University of Iowa.

The Components of a Complete Program for Crippled Children with Special Reference to Preparation for Adult Rehabilitation
Mr. Willis W. Grant, Director, Rehabilitation Division, State Board for Vocational Education.

Saturday Morning, April 10
9:00-10:30

Chairman, A. S. Hill,
School Psychologist, Des Moines

Influence of War on Group Behavior
Jacques S. Gottlieb, M.D., Assistant Professor of Psychiatry, Psychopathic Hospital, University of Iowa.

Lessons to Be Learned from Military Examination of Our Youth
H. Harlan Crank, M.D., Psychiatrist, Navy Pre-Flight School, Iowa City, formerly with Menninger Clinic, Topeka, Kansas.

ANOTHER PLEA FOR OLD MEDICAL INSTRUMENTS

The Iowa State Medical Society has received another plea from the Medical and Surgical Relief Committee of America for more old medical instruments. The first shipment which was received from Iowa has been distributed to posts in every part of the United States and also to a university in China, but the demand continues to grow. The Committee is especially anxious to get scissors and clamps for use in subchasers. Doctors who have instruments they can donate are asked to send them to the State Department of Health in Des Moines, in care of Dr. Robert L. Parker.

PREVALENCE OF DISEASE

Disease	Feb. '43	Jan. '43	Feb. '42	Most Cases Reported From
Diphtheria	6	22	14	Greene, Wapello, Woodbury
Scarlet Fever	340	234	230	Boone, Monona, Polk, Woodbury
Typhoid Fever	3	3	1	Chickasaw, Muscatine, Polk
Smallpox	2	3	5	Butler, Greene
Measles	613	287	694	Boone, Dubuque, Polk, Washington, Woodbury
Whooping Cough	97	91	84	Boone, Calhoun, Dubuque, Linn, Muscatine, Washington, Woodbury
Brucellosis	32	41	19	For the State
Chickenpox	392	417	402	Dubuque, Hancock, Mahaska, Marion, Muscatine, Poweshiek, Woodbury
German Measles	294	98	14	Black Hawk, Boone, Johnson, Mahaska, Story, Washington, Franklin
Influenza	4	17	28	Cass, Hamilton
Mumps	428	332	581	Boone, Allamakee, Pottawattamie, Webster, Woodbury
Pneumonia	99	147	209	Clinton
Poliomyelitis	2	2	0	Buchanan, Dickinson
Tuberculosis	3	96	53	Chickasaw, Mitchell, Woodbury
Tularemia	0	4	2	None
Gonorrhea	164	121	141	For the State
Syphilis	243	258	225	For the State

Your State Medical Society
meets in
Annual Session
April 29 and 30

Plan Now to Attend

Outstanding Speakers
New Presentations
Good Fellowship

Roster of Iowa Physicians in Military Service

As of March 22, 1943

Adair County

Cornell, D. D., Greenfield (APO 41, San Francisco, Cal.) ..... Capt., A.U.S.
Gantz, A. J., Greenfield (APO Los Angeles, Cal.) .. Capt., A.U.S.

Adams County

Willett, W. J., Carbon (Camp Maxey, Tex.) ..... Capt., A.U.S.

Allamakee County

Hogan, P. W., Waukon
Ivens, M. H., Waukon (Camp Shelby, La.)
Kiesau, M. F., Postville (Fort Leonard Wood, Mo.)
Rominger, C. R., Waukon (Camp Claiborne, La.) ..... A.U.S.

Appanoose County

Condon, F. J., Centerville (Bethesda, Md.) .... Major, U.S.P.H.S.
Edwards, R. E., Centerville (Fort Dix, N. J.) .. 1st Lt., A.U.S.
Huston, M. D., Centerville (Lowry Field, Colo.) .... Capt., A.U.S.

Audubon County

Koehne, F. D., Audubon (Oroville, Wash.)

Benton County

Koontz, L. W., Vinton (Carmel, Cal.) ..... Capt., A.U.S.
Senfeld, Sidney, Belle Plaine

Black Hawk County

Bickley, D. W., Waterloo (Camp Howze, Texas) .... 1st Lt., A.U.S.
Bickley, J. W., Waterloo (Fort Sill. Okla.) ..... 1st Lt., A.U.S.
Butts, J. H., Waterloo (Memphis, Tenn.) .. Lt. Comdr., U.S.N.R.
Cooper, C. N., Waterloo (Seattle, Wash.) ... Lt. Comdr., U.S.N.R.
Ellyson, C. D., Waterloo (Norfolk, Va.) ..... Lt. (jg) U.S.N.R.
Hartman, H. J., Waterloo (Fort Lewis, Wash.) .. Capt., A.U.S.
Henderson, L. J., Cedar Falls (Fort Ord, Cal.) .. Capt., A.U.S.
Hoyt, C. N., Cedar Falls (McClellan Field, Ala.) .1st Lt., A.U.S.
Ludwick, A. L., Waterloo (APO 813, New York, N. Y.) ..... Capt., A.U.S.
Marquis, F. M., Waterloo (Camp Robinson, Ark.) .. Capt., A.U.S.
O'Keefe, P. T., Waterloo (Camp Blanding, Fla.) .. Capt., A.U.S.
Paige, R. T., LaPorte City (Des Moines, Ia.) .Lt. Comdr., U.S.N.R.
Rohlf, E. L., Jr., Waterloo (APO New York, N. Y.) ..... 1st. Lt., A.U.S.
Seibert, C. W., Waterloo (Fort Wright, Wash.) Capt., A.U.S.
Smith, E. E., Waterloo (Scott Field, Ill.) ..... Major, A.U.S.
Smith, R. I., Waterloo (Reno, Nevada) ..... 1st Lt., A.U.S.
Smith, R. G., Cedar Falls (APO 34, New York, N. Y.) ..... Capt., A.U.S.
Trunnell, T. L., Waterloo (care P.M., New York, N. Y.) ..... Lt. (jg), U.S.N.R.

Boone County

Brewster, E. S., Boone (Camp Chaffee, Ark.) .... Major, A.U.S.
Healy, M. D., Boone
Shane, R. S., Pilot Mound (Des Moines, Ia.) Lt. Col., A.U.S.

Bremer County

Amlie, P. J., Tripoli (Des Moines, Ia.)
Blum, O. S., Waverly (Bremerton, Wash.) ..... Lt., U.S.N.R.
Rathe, H. W., Waverly (Fort Jackson, S. C.) ..... Capt., A.U.S.

Buchanan County

Barton, J. C., Independence (Omaha, Neb.) ..... Capt., A.U.S.
Hersey, N. L., Independence (San Diego, Cal.) ..... Lt. Comdr., U.S.N.R.
Leehey, P. J., Independence (APO 957, San Francisco, Cal.) ..... Capt., A.U.S.
Loeck, J. F., Aurora (Camp Rucker, Ala.) ..... Capt., A.U.S.

Buena Vista County

Almquist, R. E., Albert City (Camp Shelby, Miss.) .Capt., A.U.S.
Brecher, P. W., Storm Lake (Camp White, Ore.) Major, A.U.S.
Mailliard, R. E., Storm Lake (APO 254, Los Angeles, Cal.) ..... Major, A.U.S.
Shope, C. D., Storm Lake (Fort Des Moines, Ia.) 1st Lt., A.U.S.
Witte, H. J., Storm Lake (Omaha, Neb.) ..... Major, A.U.S.

Butler County

Anderson, B. V., Greene (Fleet PO, Seattle, Wash.) .... U.S.N.R.
James, R. O., Allison (Mare Island, Cal.)
Rolfs, F. O., Parkersburg (Springfield, Mo.)

Calhoun County

Grinley, A. V., Rockwell City (APO 507, New York, N. Y.) ..... 1st Lt., A.U.S.
Hobart, F. W., Lake City (Camp Grant, Ill.) .... Capt., A.U.S.
Peek, L. H., Lake City (Jefferson Barracks, Mo.) .. Capt., A.U.S.
Stevenson, W. W., Rockwell City (San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Weyer, J. J., Lohrville (Camp Carson, Colo.) .... 1st Lt., A.U.S.

Carroll County

Anneberg, A. R., Carroll (Camp Barkeley, Texas)
Anneberg, W. A., Carroll
Cochran, J. L., Carroll (Gulfport, Miss.)
Cross, D. L., Coon Rapids ..... Lt., U.S.N.R.
Freedland, Maurice, Coon Rapids
Morrison, J. R., Carroll (Camp Maxey, Texas)
Morrison, R. B., Carroll (Muroc, California) .... 1st. Lt., A.U.S.
Pascoe, P. L., Carroll (Bowman Field, Ky.)
Scannell, R. C., Carroll (APO, New York, N. Y.)
Tindall, R. N., Coon Rapids
Wyatt, M. R., Manning (Desert Center, Cal.) .... 1st Lt., A.U.S.

Cass County

Egbert, D. S., Atlantic (Fort Snelling, Minn.) Major, A.U.S.
Longstreth, C. M., Atlantic (Norman, Okla) .Lt. Comdr., U.S.N.R.
Needles, R. M., Atlantic (Camp Polk, La.) .... 1st Lt., A.U.S.
Petersen, M. T., Atlantic (Camp Gruber, Okla.) .... Capt., A.U.S.

Cedar County

Mosher, M. L., West Branch (Camp Gruber, Okla.) ..... Capt., A.U.S.
O'Neal, H. E., Tipton (Pine Camp, N. Y.) ..... Major, A.U.S.

Cerro Gordo County

Adams, C. O., Mason City (Brigham City, Utah)
Egloff, W. C., Mason City (Mesa, Ariz.)
Flickinger, R. R., Mason City (Carlisle Barracks, Penn.) ..... 1st. Lt.. A.U.S.
Hale, A. E., Mason City (Camp Hale, Colo.)
Harris. R. H., Mason City (Columbus, Ohio)
Harrison, G. E., Mason City (Boston, Mass.) ..... Col., A.U.S.
Houlahan, J. E., Mason City (Sacramento, Cal.)
Lannon, J. W., Clear Lake (APO 668, New York, N. Y.) ..... Capt., A.U.S.
Long, D. L., Mason City (Santa Ana, Cal.)
Marinos, H. G., Mason City (APO San Francisco, Cal.)
Sternhill, Irving, Mason City (APO New York, N. Y.)

Cherokee County

Bullock, G. D., Washta (Camp Livingston, La.) .... Capt., A.U.S.
Ihle, C. W., Jr., Cleghorn (Fort Leonard Wood, Mo.) ..... Capt., A.U.S.
Noble, R. P., Cherokee (Rapid City, S. Dak.) ..... Capt., A.U.S.
Swift, C. H., Jr., Marcus (Fort Bliss, Texas) .... Capt., A.U.S.

Chickasaw County

Caulfield, J. D., New Hampton (Denver, Colo.) .... Capt., A.U.S.
Murphey, A. L., Fredericksburg (APO 827, New Orleans, La.) ..... Capt., A.U.S.
O'Connor, E. C., New Hampton (Camp Crowder, Mo.) ..... Capt., A.U.S.
Richmond, P. C., New Hampton (Camp Gruber, Okla.) ..... Capt. A.U.S.

Clay County

Adams, G. W., Royal (Fort Clayton, Panama Canal Zone)
Edington, F. D., Spencer (Lowry Field, Colo.) .. Lt. Col., A.U.S.
Jones, C. C., Spencer (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
King, D. H., Spencer (Spokane, Wash.) ..... Capt., A.U.S.

Clayton County

Anderson, H. M., Strawberry Point (Camp Crowder, Mo.) ..... 1st Lt., A.U.S.
Rhomberg, E. B., Guttenberg (Camp Wallace, Texas) .Capt.,A.U.S.

Clinton County

Amesbury, H. A., Clinton (Vancouver, Wash.)
Burke, J. C., Clinton (Laredo, Tex.)
Ellison, G. M., Clinton (Washington, D. C.) ..... 1st Lt., A.U.S.
Hill, D. E., Clinton
King, R. C., Clinton (Camp Chaffee, Ark.)
Lenaghan, R. T., Clinton (Farragut, Idaho)
Meyer, A. K., Clinton (Denver, Colo.)
Norment, J. E., Clinton (Mare Island, Cal.)
Riedesel, E. V., Wheatland (Fort Douglas, Utah)
Snyder, D. C., De Witt
Van Epps, E. F., Clinton (Palm Springs, Cal.) ..... Capt., A.U.S.
Waggoner, C. V., Clinton (Seattle, Wash.) .. Lt. Cmdr., U.S.N.R.

Crawford County

Fee, C. H., Denison (Bowman Field, Ky.)
Maire, E. J., Vail (San Francisco, Cal.)
Wetrich, M. F., Manilla

Dallas-Guthrie Counties

Fail. C. S., Adel (Farragut Air Base, Idaho) ..... U.S.N.R.
Margolin, J. M., Perry (Ft. Sill, Okla.) ..... A.U.S.
Nicoll, C. A., Panora (Camp Chaffee, Ark.) ..... Capt., A.U.S.
Osborn, C. R., Dexter (San Francisco, Cal.) .... Lt. (jg), U.S.N.R.
Todd, D. W., Guthrie Center (Camp McCoy, Wis.) ..... 1st Lt., A.U.S.
Wilke, F. A., Woodward (APO 1060, New York, N. Y.)

Decatur County

Doss, W. N., Leon (APO 924, San Francisco, Cal.)
Gamet, E. E., Lamoni (Tacoma, Wash.)

Delaware County

Baumgarten, Oscar, Earlville (APO 307, Los Angeles, Cal.)
Clark, R. E., Manchester (Fort Riley, Kan.) .... 1st Lt., A.U.S.

Des Moines County

Eigenfeld, M. L., Burlington (Camp Robinson, Ark.) ..... 1st. Lt., A.U.S.
Heitzman, P. O., Burlington (Fort Leonard Wood, Mo.)
Jenkins, G. D., Burlington (West Point, N. Y.) .... Lt. Col. A.U.S.
Lohmann, C. J., Burlington (Fort Lewis, Wash.)
McKitterick, J. C., Burlington (Davisville, R. I.)
Moerke, R. F., Burlington (Abilene, Texas)
Sage, E. C., Burlington ..... Lt. Comdr., U.S.N.R.

Dickinson County

Buchanan, J. J., Milford (Fleet PO, New York, N. Y.) ..... Lt. Comdr., U.S.N.R.
Henning, G. G., Milford (Camp Adair, Ore.) ..... Capt., A.U.S.
Nicholson, C. G., Spirit Lake (Sawtelle, Cal.) ..... Capt., A.U.S.
Rodawig, D. F., Spirit Lake (Fort Hancock, N. J.) ..... Capt., A.U.S.

Dubuque County

Beddoes, M. G., Cascade (Kansas City, Mo.) .... Capt., A.U.S.
Conzett, D. C., Dubuque (Fort Riley, Kan.) ..... Lt. Col., A.U.S.
Cunningham, J. C., Dubuque (Meridian, Miss.) Capt., A.U.S.
Edstrom, Henry, Dubuque (Clinton, Iowa) ..... Major, A.U.S.

Entringer, A. J., Dubuque (APO San Francisco, Cal.) ....Capt., A.U.S.
Hall, C. B., Dubuque (San Antonio, Texas).....1st Lt., A.U.S.
Knoll, A. H., Dubuque (San Francisco, Cal.)....Major, A.U.S.
Langford, W. R., Epworth (APO 948, Seattle, Wash.) ....Capt., A.U.S.
Lavery, H. B., Dubuque (Washington, D. C.)....Lt. Col., A.U.S.
Leik, D. W., Dubuque (Douglas, Ariz.).....1st Lt., A.U.S.
Mueller, J. J., Dubuque (Hattiesburg, Miss.)....1st Lt., A.U.S.
Olson, P. F., Dubuque (Fleet PO, Seattle, Wash.)....Lt., U.S.N.R.
Painter, R. C., Dubuque (care PM, San Francisco, Cal.) ....Lt. (jg), U.S.N.R.
Paulns, J. W., Dubuque (Camp Merced, Cal.)....1st Lt., A.U.S.
Plankers, A. G., Dubuque (APO New York, N. Y.) Major, A.U.S.
Quinn, F. P., Dubuque (Carlisle Barracks, Penn.).Major, A.U.S.
Scharle, Theodore, Dubuque (Fort Lawton, Wash.) Capt., A.U.S.
Schueller, C. J., Dubuque (Camp Barkeley, Texas) 1st Lt., A.U.S.
Sharpe, D. C., Dubuque (Fort Leonard Wood, Mo.)..Capt., A.U.S.
Smith, C. W., Dubuque (care PM, San Francisco, Cal.) ....Lt. (jg), U.S.N.R.
Steffens, L. F., Dubuque (Camp Chaffee, Ark.)..Lt. Col., A.U.S.
Straub, J. J., Dubuque (care PM, San Francisco, Cal.) ....Lt., U.S.N.R.
Ward, D. F., Dubuque (Fleet PO, San Francisco, Cal.) ....Lt. Comdr., U.S.N.R.

Emmet County

Clark, J. P., Estherville (Fort Sam Houston, Texas) ....Capt., A.U.S.
Miller, O. H., Estherville (Gowen Field, Idaho) ....Lt. Comdr., U.S.N.R.

Fayette County

Belding, Leland, Waucoma
Camp, D. E., West Union (Camp Blanding, Fla.)...Capt., A.U.S.
Gallagher, J. P., Oelwein (San Diego, Cal.)
Henderson, W. B., Oelwein (St. Louis, Mo.).....Major, A.U.S.
Hess, A. M., West Union (Randolph Field, Texas) ....1st Lt., A.U.S.
Moen, H. P., West Union (Camp Barkeley, Texas)..Capt., A.U.S
Sulzbach, John, Oelwein

Floyd County

Baltzell, W. C., Charles City (Camp McCoy, Wis.)..Capt., A.U.S.
Flater, N. C., Floyd (Rockford, Ill.).....Capt., A.U.S.
Knight, R. A., Rockford (San Diego, Cal.).....Lt., U.S.N.R.
Mackie, D. G., Charles City (Topeka, Kan.)....1st Lt., A.U.S.
Miner, J. B., Jr., Charles City (San Francisco, Cal.) Lt., U.S.N.R.
Tolliver, H. A., Charles City (Fort Cronkhite, Cal.) Capt., A.U.S.

Franklin County

Byers, W. L., Sheffield (Jefferson Barracks, Mo.).1st Lt., A.U.S.
Hedgecock, L. E., Hampton (care PM, San Francisco, Cal.) ....Lt., U.S.N.R.
Randall, W. L., Hampton (San Diego, Cal.).....Lt., U.S.N.R.
Walton, S. G., Hampton (Camp Robinson, Ark.) 1st Lt., A.U.S.

Fremont County

Kerr, W. H., Hamburg (Camp Phillips, Kan.)....Capt., A.U.S.
Marrs, W. D., Tabor (APO 846, New York, N. Y.) ....1st Lt., A U.S.
Wanamaker, A. R., Hamburg (Los Angeles, Cal.)..Capt., A.U.S.

Greene County

Cartwright, F. P., Grand Junction (Casper, Wyo.) Capt., A.U.S.
Castles, W. A., Jr., Rippey (APO San Francisco, Cal.) ....Capt. A.U.S.
Hanson, L. C., Jefferson (Camp Rucker, Ala.)...1st Lt., A.U.S.
Jongewaard, A. J., Jefferson (St. Louis, Mo.).....U.S.N.R.
Limberg, J. I., Jr., Jefferson (APO San Francisco, Cal.) ....Capt., A.U.S.
Lohr, P. E., Churdan (San Diego, Cal.).....A.U.S.

Grundy County

Rose, J. E., Grundy Center (Norman, Okla.) Lt. Comdr., U.S.N.R.

Hamilton County

Buxton, O. C., Webster City (March Field, Cal.)..1st Lt., A.U.S.
Howar, B. F., Jewell (APO 514, New York, N. Y.).Capt., A.U.S.
James, D. W., Kamrar (Camp Beauregard, La.)....Capt., A.U.S.
Lewis, W. B., Webster City (Camp Young, Cal.)...Capt., A.U.S.
Mooney, F. P. Jewell (APO New York, N. Y.)
Paschal, G. A., Williams (Camp Barkeley, Texas)..Capt., A.U.S.
Patterson, R. A., Webster City (San Diego, Cal.) ....Lt. Comdr., U.S.N.R.
Ptacek, J. L., Webster City (Sheppard Field, Texas)
Thompson, E. D., Webster City (Biloxi, Miss.)..Capt., A.U.S.

Hancock-Winnebago Counties

Dolmage, G. H., Buffalo Center (Camp Robinson, Ark.)...A.U.S.
Dulmes, A. H., Klemme (Camp Lewis, Wash.).....Capt., A.U.S.
Eller, L. W., Kanawha (APO 302, New York, N. Y.) ....1st. Lt., A.U.S
Shaw, D. F., Britt (Long Beach, Cal.)
Thomas, C. W., Forest City (Camp Crowder, Mo.)..Capt., A.U.S.

Hardin County

Houliban, F. W., Ackley (APO 860, New York, N. Y.) ....1st. Lt., A.U.S.
Jansonius, J. W., Eldora (Fort Rosecrans, Cal.)....Capt., A.U.S.
Johnson, R. J., Iowa Falls (Fort Bliss, Texas)..Capt., A.U.S.
Johnson, W. A., Alden (Pendleton, Ore.)
Shurts, J. J., Eldora (Camp Roberts, Cal.).....1st Lt., A.U.S.
Todd, V. S., Eldora (Abilene, Texas)

Harrison County

Bergstrom, A. C., Missouri Valley (Camp Robinson, Ark.)
Byrnes, C. W., Dunlap (Jefferson Barracks, Mo.)
Heise, C. A., Jr., Missouri Valley
Tamisiea, F. X., Missouri Valley (Jefferson Barracks, Mo.) ....1st Lt., A.U.S.

Henry County

Brown, W. B., Mount Pleasant (Ft. Devens, Mass.) .Capt., A.U.S.
Gloeckler, B. B., Mount Pleasant (Fort Myers, Fla.) Capt., A.U.S.
Hartley, B. D., Mount Pleasant (Yuma, Ariz.)....Capt., A.U.S.
Megorden, W. H., Mount Pleasant (Ogden, Utah) 1st Lt., A.U.S.
Ristine, L. P., Mount Pleasant (Sioux Falls, S. Dak.) ....Major, A.U.S.

Howard County

Buresh, Abner, Lime Springs (San Diego, Cal.)
Nierling, P. A., Cresco (Camp Polk, La.).....1st Lt., A.U.S.

Humboldt County

Arent, A. S., Humboldt (Stockton, Cal.).....1st Lt., A.U.S.
Coddington, J. H., Humboldt (Fresno, Cal.).....1st Lt., A.U.S.

Ida County

Dressler, J. B., Ida Grove (Texarkana, Tex.)....1st Lt., A.U.S.
Harris, H. H., Battle Creek (Omaha, Neb.)....1st Lt., A.U.S.
Martin, J. W., Holstein (Montgomery, Ala.).....Capt., A.U.S.

Iowa County

McDaniel, J. D., Marengo (Fort Clark, Texas).....A.U.S.
Miller, D. F., Williamsburg (Farragut, Idaho).....Lt., U.S.N.R.

Jackson County

Swift, F. J., Jr., Maquoketa (Fort Bragg, N. C.)..Major, A.U.S.

Jasper County

Doake, Clarke, Newton.....1st Lt., A.U.S.
Minkel, R. M., Newton (APO New York, N. Y.) 1st Lt., A.U.S.
Ritchey, S. J., Newton.....Major, A.U.S.

Jefferson County

Castell, J. W., Fairfield (APO 1001, New York, N. Y.) ....Capt., A.U.S.
Gittler, Ludwig, Fairfield (APO 1001, New York, N. Y.) ....Major, A.U.S.
Graber H. E., Fairfield (Carlisle Barracks, Penn.) Major, A.U.S.
James, L. D., Fairfield (Camp Dodge, Iowa)....Lt. Col., A.U.S.
Taylor, I. C., Fairfield (Washington, D. C.)....1st Lt., A.U.S.

Johnson County

Agnew, J. W., Iowa City (Camp Phillips, Kan.)..1st Lt., A.U.S.
Allen, J. H., Iowa City (Scott Field, Ill.).....Capt., A.U.S.
Boiler, W. F., Iowa City (Fort Leonard Wood, Mo.) ....Major, A.U.S.
Boyd, E. J., Iowa City (Colorado Springs, Colo.).1st Lt., A.U.S.
Brinkhous, K. M., Iowa City (Fort Houston, Texas) Lt. Col., A.U.S.
Callahan, G. D., Iowa City (El Toro, Cal.).....Lt., U.S.N.R.
Cooper, W. K., Iowa City (Jefferson Barracks, Mo.) Capt., A.U.S.
Crowell, E. A., Iowa City (Spokane, Wash.)..1st Lt., A.U.S.
Diddle, A. W., Iowa City (Key West, Fla.)..Lt. (jg), U.S.N.R.
Dorner, R. A., Iowa City (APO New York, N. Y.).1st Lt., A.U.S.
Elmquist, H. S., Iowa City (Fleet PO, San Francisco, Cal.) ....Lt. (jg), U.S.N.R.
Emmons, M. B., Iowa City (Fort Sam Houston, Texas) ....1st Lt., A.U.S.
Flynn, J. E., Iowa City (Hot Springs, Ark.).....A.U.S.
Fourt, A. S., Iowa City (APO 1001, New York, N. Y.) ....Col., A.U.S.
Francis, N. L., Iowa City (Annapolis, Md.) Lt. (jg), U.S.N.R.
Galinsky, L. J., Oakdale (Camp Crowder, Mo.).....Capt., A.U.S.
Garlinghouse, R. O., Iowa City (Fort Snelling, Minn.)..A.U.S.
Hardin, R. C., Iowa City (APO 1001, New York, N. Y.)....A.U.S.
Hartung, Walter, Iowa City (Fort Des Moines, Iowa)..A.U.S.
Irwin, R. L., Iowa City (Iowa City, Iowa)..Lt. Comdr., U.S.N.R.
January, L. E., Iowa City (Davis-Monthan Field, Ariz.) ....1st Lt., A.U.S.
Keisler, H. D., Iowa City (Camp Barkeley, Tex.)..1st Lt., A.U.S.
Lage, R. H., Iowa City (Santa Barbara, Cal.).....Lt., U.S.N.R.
Longwell, F. H., Iowa City (APO 505, New York, N. Y.) ....Capt., A.U.S.
Nagyfy, S. F., Iowa City (Memphis, Tenn.)...Lt. (jg), U.S.N.R.
Newman, R. W., Iowa City (Fleet PO, New York, N. Y.) ....Lt., U.S.N.R.
Paulus, E. W., Iowa City (APO 1001, New York, N. Y.) ....Lt. Col., A.U.S.
Petersen, V. W., Iowa City (APO 1001, New York, N. Y.) ....Major, A.U.S.
Sells, R. L., Jr., Iowa City (Hamilton Field, Cal.).1st Lt., A.U.S.
Smith, H. F., Iowa City (Great Lakes, Ill.).Lt. Comdr., U.S.N.R.
Springer, E. W., Iowa City (APO 3417, Miami, Fla.) ....1st Lt., A.U.S.
Stadler, H. E., Iowa City (Washington, D. C.)....1st Lt., A.U.S.
Staggs, W. A., Iowa City (Camp Robinson, Ark.)..1st Lt., A.U.S.
Stephens, R. L., Iowa City (Orlando, Fla.).....Capt., A.U.S.
Stump, R. B., Iowa City (Fort Leonard Wood, Mo.)..A.U.S.
Titus, E. L., Iowa City (Fort Wright, N. Y.)....Col., A.U.S.
Vest, W. M., Iowa City (Fort Ord, Cal.).....Capt., A.U.S.
Ziffren, S. E., Iowa City (Springfield, Mo.)....1st. Lt., A.U.S.

Junior Members

Adams, M. P., Iowa City
Ahrens, J. H., Iowa City (APO San Francisco, Cal.).....A.U.S.
Ball, A. L., Iowa City (Camp Polk, La.).....Major, A.U.S.
Barrent, M. E., Iowa City (Camp Tyson, Tenn.)..Capt., A.U.S.
Black, N. M., Iowa City (McChord Field, Wash.) 1st Lt., A.U.S.
Blair, J. D., Iowa City (APO San Francisco, Cal.).Major, A.U.S.
Boyd, R. J., Iowa City (Spokane, Wash.).....Capt., A.U.S.
Brintnall, E. S., Iowa City (Colorado Springs, Colo.) ....1st Lt., A.U.S.
Burr, S. P., Iowa City (APO San Francisco, Cal.).1st Lt., A.U.S.
Connole J. F., Iowa City (Camp Bowie, Texas)..1st Lt., A.U.S.
Couch, O. A., Iowa City (Camp Van Dorn, Miss.)..1st Lt., A.U.S.
Decker, C. E., Iowa City (Oklahoma City, Okla.)..1st Lt., A.U.S.
Donnelly B. A., Iowa City (APO San Francisco, Cal.) ....1st Lt., A.U.S.
Ehrenhaft, J. L., Iowa City (March Field, Cal.)..1st Lt., A.U.S.
Englerth, F. L., Iowa City (APO San Francisco, Cal.) ....Capt., A.U.S.

Freiberg, M., Iowa City (Jefferson Barracks, Mo.).....A.U.S.
Glassman A. L., Iowa City (Palm Springs, Cal.) 1st Lt., A.U.S.
Gilliland, C. H., Iowa City (Great Lakes, Ill.) Lt. (jg), U.S.N.R.
Hamilton, H. E., Iowa City (Chicago, Ill.).....1st Lt., A.U.S.
Harms, G. E., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Ide, L. W., Iowa City (Fort Warren, Wyo.).....1st Lt., A.U.S.
Jacobs, C. A., Iowa City (APO New York, N. Y.).Major, A.U.S.
Keil, P. G., Iowa City (Sioux City, Iowa).....1st Lt., A.U.S.
Kelberg, M. R., Iowa City (Treasure Island, Cal.).....Lt. (jg), U.S.N.R
Keleher, M. F., Iowa City (Great Lakes, Ill.)..Lt. (jg), U.S.N.R.
Keohen, G. F., Iowa City (Camp Grant, Ill.)....Capt., A.U.S.
Kugler, F. E., Iowa City (Fort Warren, Wyo.)....Capt., A.U.S.
Lowry, F. C., Iowa City (Sioux Falls, S. D.)....1st Lt., A.U.S.
McCann, J. P., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
McQuiston, W. O., Iowa City (Chicago, Ill.)....1st Lt., A.U.S.
Moen, B. H., Iowa City
Moon, R. E., Iowa City (Camp Bowie, Texas)....1st Lt., A.U.S.
Phillips, R. M., Iowa City (San Francisco, Cal.) 1st Lt., A.U.S.
Pulliam, R. L., Iowa City
Randall, C. G., Iowa City
Randall, R. G., Iowa City (Waterloo, Iowa).....Capt. A.U.S.
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.).....1st Lt., A.U.S.
Russin, L. A., Iowa City (Fort Blanding, Fla.)....Capt., A.U.S.
Saar, J. L., Iowa City (APO New York, N. Y.)..Capt., A.U.S.
Sawtelle, W. W., Iowa City
Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Shand, J. A., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Shapiro, S. I., Iowa City
Simpson, F. E., Iowa City (Camp Grant, Ill.).....A.U.S.
Skewis, J. E., Iowa City (Rochester, N. Y.)..Lt. (jg), U.S.N.R.
Skouge, O. T., Iowa City
Towle, R. A., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Warren, R. F., Iowa City (Santa Barbara, Cal.).....A.U.S.
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.).....1st. Lt., A.U.S.
Wicks, W. J., Iowa City (Camp Crowder, Mo.)....Capt., A.U.S.
Williams, L. A., Iowa City (Treasure Island, Cal.).1st Lt., A.U.S.
Willumsen, H. C., Iowa City (Chico, Cal.).....Capt., A.U.S.
Wolkin, J., Iowa City (San Antonio, Texas)....Capt., A.U.S.
Yetter, W. L., Iowa City (APO New York, N. Y.) Capt., A.U.S.
Zahrt, N. E., Iowa City (Miami Beach, Fla.)....1st Lt., A.U.S.
Zimmerman, H. A., Iowa City (Santa Ana, Cal.)..1st Lt., A.U.S.

Keokuk County

Bjork, Floyd, Keota (Camp Barkeley, Texas).....A.U.S.
Doyle, J. L., Sigourney (Camp Barkeley, Texas).....A.U.S.
Engelmann, A. T., What Cheer (Camp Polk, La.) Capt., A.U.S.
Graham, J. A., Gibson (Needles, Cal.).....1st. Lt., A.U.S.
Montgomery, G. E., Keota (Fort Sam Houston, Texas)....A.U.S.
Wiley, Dudley, Hedrick (Mason City, Wash.)

Kossuth County

Clapsaddle, D. W., Burt (Durham, N. C.).....1st Lt., A.U.S.
Williams. R. L., Lakota (San Diego, Cal.)..Lt. Comdr., U.S.N.R.

Lee County

Ashline, G. H., Keokuk (Camp Young, Cal.)
Cleary, H. G., Fort Madison (APO 980, Seattle, Wash.)
Cooper, R. E., Keokuk (Fort Leonard Wood, Mo.)
Johnstone, A. A., Keokuk (Camp Robinson, Ark.)
McKee, T. L., Keokuk (APO 922, San Francisco, Cal.).....Major, A.U.S.
Pumphrey, L. C., Keokuk (Fort Leavenworth, Kan.)
Rankin, J. R., Keokuk (APO San Francisco, Cal.)
Steffey, F. L., Keokuk (Fort Snelling, Minn.)
Van Werden, B. D., Keokuk (Fort Jackson, S. C.)..Capt., A.U.S.

Linn County

Andre, G. R., Lisbon (Camp Barkeley, Texas)....Major, A.U.S.
Berney, P. W., Cedar Rapids (San Francisco, Cal.) Capt., A.U.S.
Chapman, R. M., Cedar Rapids (Chicago, Ill.)..1st Lt., A.U.S.
Coughlan, V. H., Cedar Rapids (Fort Snelling, Minn.)
Courter, W. O., Cedar Rapids (Fort Warren, Wyo.).Capt., A.U.S.
Crew, P. I., Marion (Monroe, La.).....Capt., A.U.S.
Dunn, F. C., Cedar Rapids (Pocatello, Idaho)....Capt., A.U.S.
Halpin, L. J., Cedar Rapids (Atlanta, Ga.)....Major, A.U.S.
Hecker, J. T., Cedar Rapids (Pecos, Texas).....1st Lt., A.U.S.
Jirsa, H. O., Cedar Rapids (APO 813, New York, N. Y.).....Capt., A.U.S.
Keith, J. J., Marion (APO 502, San Francisco, Cal.).....Capt., A.U.S.
Kieck, E. G., Cedar Rapids (San Diego, Cal.) Lt. Comdr., U.S.N.R.
Kruckenberg, W. G., Mount Vernon (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Locher, R. C., Cedar Rapids (Brownsville, Texas)..Capt., A.U.S.
MacDougal, R. F., Cedar Rapids (Salina, Kan.)....Capt., A.U.S.
McConkie, E. B., Cedar Rapids (Sioux Falls, S. Dak.).....Major, A.U.S.
McQuiston, J. S., Cedar Rapids (Salina, Kan.)..Major, A.U.S.
Netolicky, R. Y., Cedar Rapids (San Francisco, Cal.).Lt., U.S.N.R.
Noe, C. A., Cedar Rapids (Hot Springs, Ark.)..Major, A.U.S.
Parke, John, Cedar Rapids (APO 34, New York, N. Y.).....Capt., A.U.S.
Proctor, R. D., Cedar Rapids (Corpus Christi, Texas).....Lt. Comdr., U.S.N.R.
Redmond, J. J., Cedar Rapids (APO 1001, New York, N. Y.).....Capt., A.U.S.
Rieniets, J. H., Cedar Rapids (Great Lakes, Ill.).....Lt. Comdr., U.S.N.R.
Sedlacek, L. B., Cedar Rapids (Camp Screven, Ga.) Major, A.U.S
Smrha, J. A., Cedar Rapids (Camp Davis, N. C.)..1st Lt., A.U.S
Stark, C. H., Cedar Rapids (Pueblo, Colo.).....Capt., A.U.S
Sulek, A. E., Cedar Rapids (APO 960, San Francisco, Cal.).....Major, A.U.S
Woodhouse, K. W., Cedar Rapids (APO 34, New York, N. Y.).....Major, A.U.S
Wray, R. M., Cedar Rapids (APO 958, San Francisco, Cal.).....Capt., A.U.S
Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R

Louisa County

DeYarman, K. T., Morning Sun (San Antonio, Texas).....1st Lt., A.U.S
Tandy, R. W., Morning Sun (Norfolk, Va.)..Lt. Comdr., U.S.N.R.

Lucas County

Lister, K. E., Chariton (Fort Snelling, Minn.)

Lyon County

Cook, S. H., Rock Rapids (Memphis, Tenn.).....Capt., A.U.S.
*Corcoran, T. E., Rock Rapids (APO New York, N. Y.).....Capt. A.U.S
De Young, G. M., George (Camp Barkeley, Texas)..Capt., A.U.S
Moriarty, J. F., Rock Rapids (Fort Leonard Wood, Mo.).....1st Lt., A.U.S.

Madison County

Boden, H. N., Truro (Fresno, Cal.)
Chesnut, P. F., Winterset (Portland, Ore.).....1st Lt., A.U.S.
Wicks, R. F., Winterset (Portland, Ore.)
Veltman, J. F., Winterset (St. Louis, Mo.).....Capt., A.U.S.

Mahaska County

Bennett, G. W., Oskaloosa (Fort Riley, Kan.)..Major, A.U.S.
Clark, G. H., Oskaloosa.....Lt. Comdr., U.S.N.R.
Greenlee, M. R., Oskaloosa (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Lemon, K.M., Oskaloosa.....1st Lt., A.U.S.
Zager, L. L., Oskaloosa (Camp Rucker, Ala.)....1st. Lt., A.U.S.

Marion County

Elliott, V. J., Knoxville (Portland, Ore.).....Capt., A.U.S.
Mater, D. W., Knoxville (Lincoln, Neb.).....Capt., A.U.S.
Ralston, F. P., Knoxville (Indio, Cal.).....Capt., A.U.S.
Schiek, C. M., Knoxville.....Lt. Comdr., U.S.N.R.
Schroeder, M. C., Pella (Camp Uhlan, Texas)....1st Lt., A.U.S.
Williams, D. B., Knoxville.....Capt. A.U.S.

Marshall County

Carpenter, R. C., Marshalltown (APO New York, N. Y.).....Capt., A.U.S.
Marble, E. J., Marshalltown (San Diego, Cal.)....Lt., U.S.N.R.
Marble, W. P., Marshalltown (Walla Walla, Wash.) Capt., A.U.S.
Meyer, M. G., Marshalltown (Camp Polk, La.)....Capt., A.U.S.
Noonan, J. J., Marshalltown (San Diego, Cal.)..Major, A.U.S.
Phelps, R. E., State Center (Fort Cronkhite, Cal.).....1st Lt., A.U.S.
Sinning, J. J., Melbourne (Camp Robinson, Ark.)..Capt., A.U.S.
Smith, E. M., State Center (Sioux City, Ia.).....Major, A.U.S.
Stegman, J. J., Marshalltown (Portland, Ore.)..Capt., A.U.S.
Wells, R. C., Marshalltown (Gowen Field, Idaho) 1st Lt., A.U.S.
Wolfe, O. D., Marshalltown (Fort Riley, Kan.)..Capt., A.U.S.
Wolfe, R. M., Marshalltown (Cherry Point, N. C.).....Lt. (jg), U.S.N.R.

Mills County

DeYoung, W. A., Glenwood (Camp Crowder, Mo.)..Capt., A.U.S.
Magaret, E. C., Glenwood (Lubbock, Texas)....1st Lt., A.U.S.
Shonka, T. E., Malvern (Baltimore, Md.).....1st Lt., A.U.S.

Mitchell County

Culbertson, R. A., St. Ansgar (Modesto, Cal.).....Major, A.U.S.
Moore, E. E. (Camp Pickett, Virginia).....Major, A.U.S.
Owen, William (San Diego, Cal.).....Lt. (jg), U.S.N.R.
Walker, T. G., Riceville (Minneapolis, Minn.).....Lt., U.S.N.R.

Monona County

Almer, L. E., Moorehead (Fort Knox, Ky.)
Ganzhorn, H. L., Mapleton (Carlisle Barracks, Pa.).....1st. Lt., A.U.S.
Gaukel, L. A., Onawa (APO 937, Seattle, Wash.)..1st Lt., A.U.S.
†Harlan, M. E., Onawa (care PM, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Stauch, M. O., Whiting (Fort Rosecrans, Cal.).....A.U.S.
Wainwright, M. T., Mapleton (APO 939, Seattle, Wash.)..A.U.S.
Wolpert, P. L., Onawa (Denver, Colo.).....Capt., A.U.S.

Monroe County

Richter, H. A., Albia (Waco, Texas).....Capt., A.U.S.
Smith, R. A., Albia (San Antonio, Texas).....1st Lt., A.U.S.

Montgomery County

Bastron, H. C., Red Oak (APO 525, New York, N. Y.).....Major, A.U.S.
Hansen, F. A.. Red Oak (San Diego, Cal.).....Lt., U.S.N.R.
Moriarty, L. R., Villisca (APO 944, Seattle, Wash.).Capt., A.U.S.
Sorensen, E. M., Red Oak (Jefferson Barracks, Mo.).....1st. Lt., A.U.S.

Muscatine County

Ady, A. E., West Liberty (care PM, San Francisco, Cal.)U.S.N.R.
Asthalter, R. W., Muscatine (Fort Meade, Md.)..1st Lt., A.U.S.
Carlson, E. H., Muscatine (Kalamazoo, Mich.)....Capt., A.U.S.
Goad, R. R., Muscatine (Washington, D. C.) Lt. Comdr., U.S.N.R.
Kimball, J. E., Jr., West Liberty (APO Miami, Fla.)
Lindley, E. L., Muscatine (APO Los Angeles, Cal.).Capt., A.U.S.
Muhs, E. O., Muscatine (Camp Claiborne, La.).....Capt., A.U.S.
Norem, Walter, Muscatine (APO Miami, Fla.)....Capt., A.U.S.

Robertson, T. A., West Liberty (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Sywassink, G. A., Muscatine (Camp Campbell, Ky.) Major, A.U.S.
Whitmer, L. H., Wilton Junction (Fort Sill, Okla.) Major, A.U.S.

O'Brien County

Getty, E. B., Primghar (Camp Robinson, Ark.) 1st Lt., A.U.S.
Hayne, W. W., Paullina (APO New York, N. Y.) 1st Lt., A.U.S.
Moen, S. T., Hartley (APO 3492, New York, N. Y.) Major, A.U.S.
Myers, K. W., Sheldon (Watertown, S. Dak.) 1st Lt., A.U.S.

Osceola County

Kuntz, G. S., Sibley (APO 34, New York, N. Y.)

Page County

Barnes, C. A., Shenandoah (Fort Bragg, N. C.) Capt., A.U.S.
Blackman, Nathan, Shenandoah ..... Capt., A.U.S.
Bossingham, E. N., Clarinda (Camp Roberts, Cal.) Capt., A.U.S.
Bunch, H. Mck., Shenandoah (Farragut, Idaho) ..... Lt. Comdr., U.S.N.R.
*Burdick, F. D., Shenandoah (APO, New York, N. Y.) ..... Capt., A.U.S.
Burnett, F. K., Clarinda (Camp Carson, Colo.) Major, A.U.S.
Little, E. B., Shenandoah ..... 1st Lt., A.U.S.
Rausch, G. R., Clarinda (Wendover Field, Utah) 1st Lt., A.U.S.
Savage, L. W., Shenandoah (Fort Meade, Md.) 1st Lt., A.U.S.

Palo Alto County

Davey, W. P., Emmetsburg (San Diego, Cal.) Lt. (jg), U.S.N.R.

Plymouth County

Bowers, C. V., LeMars (Carlisle Barrack, Pa.) 1st Lt., A.U.S.
Foss, R. H., Remsen (Salt Lake City, Utah) 1st Lt., A.U.S.
Wolfson, Harold (Fort Lewis, Wash.) ..... Capt., A.U.S.

Pocahontas County

Blair, F. L., Jr., Fonda ..... 1st Lt., A.U.S.
Herrick, T. G., Gilmore City (Camp Hale, Colo.) Capt., A.U.S.
Larson, J. B., Laurens (Camp Chaffee, Ark.) ..... 1st Lt., A.U.S.
Leserman, L. K., Rolfe (Camp Polk, La.) ..... 1st Lt., A.U.S.

Polk County

Abbott, W. D., Des Moines (Oakland, Cal.) Lt. Comdr., U.S.N.R.
Anderson, N. B., Des Moines (APO 668, New York, N. Y.) ..... Lt. Col., A.U.S.
Angell, C. A., Des Moines (Camp Maxey, Texas) Capt., A.U.S.
Anspach, R. S., Mitchellville (MacDill Field, Fla.) Major, A.U.S.
Barner, J. L., Des Moines (Atlanta, Ga.) Major, A.U.S.
Barnes, B. C., Des Moines (Ogden, Utah) ..... Capt., A.U.S.
Bates, M. T., Des Moines (Fleet PO, New York, N. Y.) ..... Lt. Comdr., U.S.N.R.
Bender, H. R., Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Bond, T. A., Des Moines (Rochester, Minn.) Lt. (jg), U.S.N.R.
Bone, H. C., Des Moines (Arlington, Cal.) ..... Capt., A.U.S.
Brown, A. W., Des Moines (Fort Leavenworth, Kan.) ..... Capt., A.U.S.
Bruner, J. M., Des Moines (Fort Bliss, Texas) Major, A.U.S.
Bruns, P. D., Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
*Burgeson, F. M., Des Moines (APO 1001, New York, N. Y.) ..... Capt., A.U.S.
Caldwell, J. W., Des Moines (Edmonton, Alberta, Canada) ..... Flight Lt., R.C.A.F.
Chambers, J. W., Des Moines (Fort Riley, Kan.) 1st Lt., A.U.S.
Chase, W. B., Jr., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Clark, G. E., Jr., Des Moines (Randolph Field, Texas) ..... 1st Lt., A.U.S.
Connell, J. R., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Corn, H. H., Des Moines (St. Louis, Mo.) ..... 1st Lt., A.U.S.
Coughlan, D. W., Des Moines (Camp Gruber, Okla.) Capt., A.U.S.
Crowley, D. F., Jr., Des Moines (APO New York, N. Y.) ..... Capt., A.U.S.
Crowley, F. A., Des Moines (APO New York, N. Y.) ..... 1st Lt., A.U.S.
DeCicco, Ralph, Des Moines (APO Los Angeles, Cal.) ..... Capt., A.U.S.
Decker, H. G., Des Moines (Long Beach, Cal.) Lt., U.S.N.R.
Downing, A. H., Des Moines (Fort Snelling, Minn.) ..... 1st Lt., A.U.S.
Dushkin, M. A., Des Moines (Fort Huachuca, Ariz.) ..... Capt., A.U.S.
Elliott, O. A., Des Moines (Pecos, Texas) ..... 1st Lt., A.U.S.
Ellis, H. G., Des Moines (Casper, Wyo.) ..... 1st Lt., A.U.S.
Ervin, L. J., Des Moines (Fort Clark, Texas) Major, A.U.S.
Fried, David, Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Fracasse, John, Des Moines ..... 1st Lt., A.U.S.
George, E. M., Des Moines (Camp Dodge, Iowa) ..... Lt. Comdr., U.S.N.R.
Gerchek, E. W., Des Moines
Goldberg, Louie, Des Moines (Randolph Field, Texas) ..... 1st Lt., A.U.S.
Gordon, A. M., Des Moines (Fort Ord, Cal.) Capt., A.U.S.
Graeber, F. O., Des Moines (Aberdeen, S. Dak.) 1st Lt., A.U.S.
Greek, L. M., Des Moines (Camp Crowder, Mo.) 1st Lt., A.U.S.
Gurau, H. H., Des Moines (Portland, Ore.) 1st Lt., A.U.S.
Haines, D. J., Des Moines (Denver, Colo.) 1st Lt., A.U.S.
Harris, D. D., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Harris, H. L., Des Moines ..... 1st Lt., A.U.S.
Hess, John, Jr., Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
James, A. D., Des Moines (Fleet PO, San Francisco, Cal.) ..... Comdr., U.S.N.R.
Johnston, C. H., Des Moines (APO 639, New York, N. Y.) ..... Lt. Col., A.U.S.
Kast, D. H., Des Moines (Fort Stevens, Ore.) ..... Capt., A.U.S.
Kelley, E. J., Des Moines (Piedmont, Cal.) Lt. Comdr., U.S.N.R.
Kelly, D. H., Des Moines (Denver, Colo.) ..... Lt. Col., A.U.S.
Klocksiem, H. L., Des Moines ..... Lt. (jg), U.S.N.R.
Kottke, E. E., Des Moines (Temple, Texas) 1st Lt., A.U.S.
Landis, S. N., Des Moines (West Palm Beach, Fla.) ..... 1st Lt., A.U.S.
La Tona, Salvatore, Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Lederman, James, Des Moines ..... 1st Lt., R.C.A.
Lehman, E. W., Des Moines (Memphis, Tenn.) Major, A.U.S.
Lovejoy, E. P., Des Moines (Mare Island, Cal.) ..... Lt. Comdr., U.S.N.R.
Maloney, P. J., Des Moines (Fort Lewis, Wash.) 1st Lt., A.U.S.
Marquis, G. S., Des Moines (Chicago, Ill.) Lt. Comdr., U.S.N.R.
Martin, L. E., Des Moines (Helena, Ark.) ..... 1st Lt., A.U.S.
Mauritz, E. L., Des Moines (APO 668, New York, N. Y.) ..... 1st Lt., A.U.S.
McCoy, H. J., Des Moines (Iowa City, Iowa) Comdr., U.S.N.R.
McDonald, D. J., Des Moines (March Field, Cal.) Capt., A.U.S.
McNamee, J. H., Des Moines (Seattle, Wash.) ..... Lt. Comdr., U.S.N.R.
Mencher, E. W., Des Moines ..... 1st Lt., A.U.S.
Merkel, B. M., Des Moines (Tullahoma, Tenn.) Major, A.U.S.
Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.) ..... Capt., A.U.S.
Morden, R. P., Des Moines (Edgewood Arsenal, Md.) ..... 1st Lt., A.U.S.
Murphy, J. H., Des Moines (San Diego, Cal.) ..... Lt., U.S.N.R.
Nelson, A. L., Des Moines (Camp Livingston, La.) Capt., A.U.S.
Noun, L. J., Des Moines (Balboa, Panama Canal Zone) ..... Lt. (jg), U.S.N.R.
Noun, M. H., Des Moines (APO 871, New York, N. Y.) ..... Major, A.U.S.
Nourse, M. H., Des Moines (Bethesda, Md.) Lt. (jg), U.S.N.R.
Patton, B. W., Des Moines (Camp Robinson, Ark.) ..... 1st Lt., A.U.S.
Pearlman, L. R., Des Moines (APO Seattle, Wash.) ..... 1st Lt., A.U.S.
Peisen, C. J., Des Moines (Camp Perry, Ohio) 1st Lt., A.U.S.
Penn, E. C., West Des Moines (Spokane, Wash.) ..... 1st Lt., A.U.S.
Pfeiffer, E. P., Des Moines (Springfield, Mo.) Capt., A.U.S.
Phillips, A. B., Des Moines (Corpus Christi, Texas) ..... Lt., U.S.N.R.
Porter, R. J., Des Moines (Orlando, Fla.) ..... 1st Lt., A.U.S.
Powell, L. D., Des Moines (Long Beach, Cal.) Comdr., U.S.N.R.
Pratt, E. B., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Priestley, J. B., Des Moines (Camp Phillips, Kan.) Major, A.U.S.
Purdy, W. O., Des Moines (Camp Howze, Texas) Capt., A.U.S.
Riegelman, R. H., Des Moines (APO 634, New York, N. Y.) ..... Major, A.U.S.
Robinson, V. C., Des Moines (Tampa, Fla.) Capt., A.U.S.
Rotkow, M. J., Des Moines (Louisville, Ky.) 1st Lt., A.U.S.
Schaeferle, M. J., Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Schlaser, V. L., Des Moines (Bethesda, Md.) ..... Lt. U.S.N.R.
Shepherd, L. K., Des Moines (APO New York, N. Y.) ..... 1st Lt., A.U.S.
Shifler, H. K., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Singer, P. L., Des Moines (Camp Grant, Ill.) 1st Lt., A.U.S.
Skultety, J. A., Des Moines (Brownsville, Texas) ..... 1st. Lt., U.S.P.H.S.
Smead, H. H., Des Moines (Bangor, Me.) ..... Capt., A.U.S.
Smith, H. J., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Smith, R. T., Des Moines (Meridian, Miss.) 1st Lt., A.U.S.
Snodgrass, R. W., Des Moines (Fort Rosecrans, Cal.) ..... Capt., A.U.S.
Snyder, G. E., Grimes (Camp Robinson, Ark.) ..... Major, A.U.S.
Sohm, H. A., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Sorensen, R. M., Des Moines (Topeka, Kan.) Major, U.S.P.H.S.
Springer, F. A., Des Moines (Treasure Island, Cal.) ..... Lt. Comdr., U.S.N.R.
Stearns, A. B., Des Moines (Denver, Colo.) Major, A.U.S.
Stickler, Robert, Des Moines (Fort Benning, Ga.) 1st. Lt., A.U.S.
Stitt, P. L., Des Moines (Seattle, Wash.) Lt. (jg), U.S.N.R.
Throckmorton, J. F., Des Moines (Camp Howze, Texas) ..... Capt. A.U.S.
Toubes, A. A., Des Moines (Greenville, Miss.) 1st Lt., A.U.S.
Turner, H. V., Des Moines (Hot Springs, Ark.) 1st Lt., A.U.S.
Updegraff, Thomas, Des Moines (Spokane, Wash.) 1st Lt., A.U.S.
Van Hale, L. A., Des Moines (Butler, Penn.) 1st Lt., A.U.S.
Vaubel, E. K., Des Moines (Portland, Ore.) ..... Capt., A.U.S.
Wagner, E. C., Des Moines (Washington, D. C.) 1st Lt., A.U.S.
Willett, W. M., Des Moines (Fort Bragg, N. C.) 1st Lt., A.U.S.
Wirtz, D. C., Des Moines (Great Lakes, Ill.) Lt. Comdr., U.S.N.R.
Zarchy, A. C., Des Moines (Camp Cook, Cal.) ..... Capt., A.U.S.

Pottawattamie County

Beaumont, F. H., Council Bluffs (APO New York, N. Y.) ..... Major, A.U.S.
Cogley, J. P., Council Bluffs (APO Los Angeles, Cal.) ..... Capt., A.U.S.
Collins, R. M., Council Bluffs (San Diego, Cal.) Lt., U.S.N.R.
Dean, A. M., Council Bluffs (Pensacola, Fla.) ..... Lt. Comdr., U.S.N.R.
Hennessy, J. D., Council Bluffs (Chicago, Ill.) 1st Lt., A.U.S.
Jensen, A. L., Council Bluffs (APO 1104, San Francisco, Cal.) ..... Lt. Col., A.U.S.
Klok, G. J., Council Bluffs (Athol, Idaho) Lt. (jg), U.S.N.R.
Kurth, C. J., Council Bluffs (Camp Crowder, Mo.) 1st Lt., A.U.S.
Limbert, E. M., Council Bluffs (Camp Carson, Colo.) ..... Capt. A.U.S.
Maiden, S. D., Council Bluffs (San Francisco Cal.) ..... Major, A.U.S.

Martin, L. R., Council Bluffs (APO 35, Los Angeles, Cal.) ....Capt., A.U.S.
Moskovitz, J. M., Council Bluffs (Camp Lockett Cal.) ....Capt., A.U.S.
Sternhill, Isaac, Council Bluffs (APO 3552, Seattle, Wash.) ....Capt., A.U.S.
Tinley, R. E., Council Bluffs (APO New York, N. Y.) ....Capt., A.U.S.
Treynor, J. V., Council Bluffs (South Bend, Ind.) ....Lt. Comdr., U.S.N.R.
Wieseler, R. J., Avoca (McChord Field, Wash.).....A.U.S.
Wurl, O. A., Council Bluffs (APO 0887, New York, N. Y.) ....Capt., A.U.S.

Poweshiek County

Brobyn, T. E., Grinnell (Camp San Luis Obispo, Cal.) ....Capt., A.U.S.
Hickerson, L. C., Brooklyn (Oxnard, Cal.).....1st. Lt., A.U.S.
Korfmacher, E. S., Grinnell (San Francisco, Cal.) ....Capt., A.U.S.
Niemann, T. V., Brooklyn (Camp Shelby, Miss.) ....1st Lt., A.U.S.
Parish, J. R., Grinnell (Treasure Island, Cal.) ....Lt. Comdr., U.S.N.R.

Ringgold County

Seaman, C. L., Mount Ayr (Van Buren, Ark.)..Capt., A.U.S.

Sac County

Bassett, G. H., Sac City (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
Deters, D. C., Schaller (APO 1001, New York, N. Y.) ....Capt., A.U.S.
Evans, W. I., Sac City (Camp Hood, Texas)..1st Lt., A.U.S.
Klocksiem, R. G., Odebolt (Fleet PO, San Francisco, Cal.) ....Lt. (jg), U.S.N.R.
Neu, H. N., Sac City (March Field, Cal.).....Capt., A.U.S.

Scott County

Baker, R. W., Davenport (Rock Island, Ill.)..1st Lt., A.U.S.
Balzer, W. J., Davenport (APO Seattle, Wash.)..1st Lt., A.U.S.
Block. L. A., Davenport (APO New York, N. Y.)..Major, A.U.S.
Bishop, J. F., Davenport (APO 972, Seattle, Wash.) ....1st Lt., A.U.S.
Boden, W. C., Davenport (Biloxi, Miss.).....Capt., A.U.S.
Brown, D. H., Davenport (Carlisle Barracks, Pa.)..Capt., A.U.S.
Brown, M. J., Davenport (Camp Hale, Colo.).....Capt., A.U.S.
Carey, E. T., Davenport (Fort Devens, Mass.)..1st Lt., A.U.S.
Christiansen, C. C., Dixon (APO 1104, San Francisco, Cal.) ....1st Lt., A.U.S.
Cummins, G. M., Jr., Davenport.....1st Lt., A.U.S.
Decker, C. E., Davenport (Oklahoma City, Okla.) ....1st Lt., A.U.S.
Evans, H. J., Davenport (Colorado Springs, Colo.).Capt., A.U.S.
Gibson, P. E., Davenport (Palm Springs, Cal.).....Capt., A.U.S.
Hurevitz, H. M., Davenport (APO New York, N. Y.).Capt., A.U.S.
Hurteau, Everett, Davenport (APO New York, N. Y.) ....1st Lt., A.U.S.
Hurteau, W. W., Davenport (Camp Barkeley, Texas) ....Major, A.U.S.
Kimberly, L. W., Davenport (New Orleans, La.).Capt., A.U.S.
Krakauer, Max, Davenport (Fort Hayes, Ohio)....1st Lt., A.U.S.
LaDage, L. H., Davenport (Camp Campbell, Ky.)..Capt., A.U.S.
Lorfeld, G. W., Davenport (Fort Myers, Fla.)....Capt., A.U.S.
Marker, J. I., Davenport (Camp Carson, Colo.)..Col., A.U.S.
McMeans, T. W., Davenport (APO New York, N. Y.) ....1st Lt., A.U.S.
Neufeld, R. J., Davenport (Rock Island, Ill.)..1st Lt., A.U.S.
Sheeler, I. H., Davenport (Omaha, Neb.).....1st Lt., A.U.S.
Smazal. S. F., Davenport (Pando, Colo.).....1st Lt., A.U.S.
Sorenson, A. C., Davenport (Oakland, Cal.)..Lt. Comdr., U.S.N.R.
Sunderbruch, J. H., Davenport (Paris, Texas)....1st Lt., A.U.S.
Weinberg, H. B., Davenport (Fort Benning, Ga.)..Major, A.U.S.
Zukerman, C. M., Bettendorf (Carlisle Barracks, Penn.) ....1st Lt., A.U.S.

Shelby County

Bisgard, C. V., Harlan (Farragut Air Base, Idaho) ....Lt. Comdr., U.S.N.R.
Griffith, W. O., Shelby.....A.U.S.

Sioux County

Gleysteen, R. R., Alton (Fleet PO, San Francisco, Cal.) ....Lt., U.S.N.R.
Grossmann, E. B., Orange City (Fort Sam Houston, Texas) ....1st Lt., A.U.S.
Larsen, M. O., Hawarden (Camp Robinson, Ark.)..Major, A.U.S.

Story County

Conner, J. D., Nevada (Camp Robinson, Ark.)....1st Lt., A.U.S.
Fellows, J. G., Ames (Carlisle Barracks, Penn.).Capt., A.U.S.
Lekwa, A. H., Story City (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
McFarland, G. E., Jr.. Ames (San Pedro, Cal.)....Lt.. U.S.N.R.
McFarland, J. E., Ames (Farragut, Idaho)..Lt. Comdr., U.S.N.R.
Rosebrook, L. E., Ames (Randolph Field, Texas).1st Lt., A.U.S.
Sperow, W. B., Nevada (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
Thorburn, O. L., Ames (Las Vegas, Nevada)..Major, A.U.S.

Tama County

Boller, G. C., Traer (Camp Bowie, Texas)
Dobias, S. G., Chelsea (APO 937, Seattle, Washington)
Havlik, A. J., Tama (Fleet PO, San Francisco, Cal.).Lt., U.S.N.R.
Schaeferle, L. G., Gladbrook (Fort Leonard Wood, Mo.)
Standefer, J. M., Tama (San Diego, Cal.)

Taylor County

Hardin, J. F., Bedford (Fort Leonard Wood, Mo.)

Union County

Paragas, M, R., Creston (Avon Park, Fla.).....Capt., A.U.S.
Ryan, C. J., Creston (Scribner, Neb.).....1st Lt., A.U.S.

Wapello County

Brentan, Emanuel, Ottumwa (APO 252, New York, N. Y.) ....1st Lt., A.U.S
Brody, Sidney, Ottumwa (APO New York, N. Y.)..Major, A.U.S
Gilfillan, C. D. N., Eldon (Battle Creek, Mich.)
Hughes, R. O., Ottumwa (San Diego, Cal.)
Nelson, F. L., Jr., Ottumwa
Prewitt, L. H., Ottumwa
Selman, R. J., Ottumwa (El Paso, Texas)
Struble, G. C., Ottumwa (Fort Harrison, Ind.)
Whitehouse, W. N., Ottumwa
Worley, C. L., Ottumwa (Camp Shelby, Miss.)....Capt., A.U.S.

Warren County

Fullgrabe E. A., Indianola (Bethesda, Md.) Lt. (jg), U.S.N.R.
Shaw, E. E., Indianola (APO 10305, New Orleans, La.) ....Capt., A.U.S.
Trueblood, C. A., Indianola (Camp Campbell, Ky.) 1st Lt., A.U.S.

Washington County

Boice, C. L., Washington (Pensacola, Wash.) Lt. (jg), U.S.N.R.
Droz, A. K., Washington (Grosse Ile, Mich.).Lt. Comdr., U.S.N.R.
Mast, T. M., Washington (Portland, Ore.).....Lt. U.S.N.R.
Stutsman, R. E., Washington (Pensacola, Fla.)....Lt., U.S.N.R.
Ware, S. C., Kalona (Fort Meade, Md.).....1st Lt., A.U.S.

Wayne County

Hyatt, C. N., Jr., Humeston (Indio, Cal.).....Capt., A.U.S.

Webster County

Baker, C. J., Fort Dodge (APO New York, N. Y.)...Capt., A.U.S.
Burch, E. S., Dayton (Camp Livingston, La.).....Capt., A.U.S.
Burleson, M. W., Fort Dodge (Vancouver, Wash.,..1st Lt., A.U.S.
Coughlan, C. H., Fort Dodge (Jefferson Barracks, Mo.) ....Major, A.U.S.
Joyner, N. M., Fort Dodge (Brooklyn Field, Ala.)
Kluever, H. C., Fort Dodge (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Larsen, H. T., Fort Dodge (Baltimore, Md.)...Lt. (jg), U.S.N.R.
Shrader, J. C., Fort Dodge (Camp Young, Cal.)....Major, A.U.S.
Thatcher, O. D., Fort Dodge (Tampa, Fla.).....1st Lt., A.U.S.
Thatcher, W. C., Fort Dodge (Fort Meade, Md.)....Capt., A.U.S.
Van Patten, E. M., Ft. Dodge (Alamogordo, N. M.).1st Lt., A.U.S.

Winneshiek County

Fritchen, A. F., Decorah (APO San Francisco, Cal.) ....Comdr., U.S.N.R.
Hospodarsky, L. J., Ridgeway (Seattle, Wash.)..Capt., A.U.S.
Larson, L. E., Decorah (Farragut, Idaho).....U.S.N.R.
Svendsen, R. N., Decorah (San Diego, Calif.)..Lt. (jg) U.S.N.R.
Van Besien, G. J., Decorah (Fort Leavenworth, Kan.).....A.U.S.

Woodbury County

Bettler, P. L., Sioux City (APO San Francisco, Cal.) ....Major, A.U.S.
Blackstone, M. A., Sioux City (Pittsburg, Cal.).1st Lt., A.U.S.
Boe, Henry, Sioux City (Salina, Kan.).....Capt., A.U.S.
Burroughs, H. H., Sioux City.....Lt. (jg), U.S.N.R.
*Cmeyla, P. M., Sioux City (APO San Francisco, Cal.) ....Capt., A.U.S.
Cowan, J. A., Sioux City (Oklahoma City, Okla.) ....Major, U.S.P.H.S.
Crowder, R. E., Sioux City (San Diego, Cal.).Lt. Comdr.. U.S.N.R.
Dimsdale, L. J., Sioux City (Camp Claiborne, La.).1st Lt., A.U.S.
Down, H. I., Sioux City (Camp Breckenridge, Ky.) Major, A.U.S.
Elson, V. J., Danbury (APO 702, Seattle Wash.)....Capt., A.U.S.
Frank, L. J., Sioux City (Mare Island, Cal.).Lt. Comdr., U.S.N.R.
Graham, J. W., Sioux City (San Diego, Cal.).Lt. Comdr., U.S.N.R.
Grossman, Milton, Sioux City (Hobbs, N. M.)..Capt., A.U.S.
Heffernan, C. E., Sioux City (Salt Lake City, Utah) ....1st Lt., A.U..S
Hicks, W. K., Sioux City (Fort Riley, Kan.)..Major, A.U.S.
Honke, E. M., Sioux City (Palm Springs, Cal.)..Capt., A.U.S.
Kaplan, David, Sioux City (Fort Bragg, N. C.)..1st Lt., A.U.S.
Knott, R. C., Sioux City (New York, N. Y.)....Capt., A.U.S.
Krigsten, W. M., Sioux City (Springfield, Mo.)..Lt. Col., A.U.S.
Martin, R. F., Sioux City (Camp Atterbury, Ind.).1st Lt., A.U.S.
Mattice, L. H., Danbury (Fort Lewis, Wash.).....1st Lt., A.U.S.
McCuistion, H. M., Sioux City (APO New York, N. Y.) ....Capt., A.U.S.
Mugan, R. C., Sioux City (Gowen Field, Idaho)..1st Lt., A.U.S.
Osincup, P. W., Sioux City (Edgewood Arsenal. Md.) ....1st Lt., A.U.S.
Rarick, I. H., Sioux City (Soquel, Cal.).....1st Lt., A.U.S.
Reeder, J. E., Jr., Sioux City (Modesto, Cal.)....Capt., A.U.S.
Ryan, M. J., Sioux City (Topeka, Kan.).....Capt., A.U.S.
Schwartz, J. W., Sioux City (Camp Crowder, Mo.).Major, A.U.S.
Tracy, J. S., Sioux City (Salt Lake City, Utah)....Capt., A.U.S.
Wilson, L. L., Sioux City (Camp San Luis Obispo, Cal.) ....Capt., A.U.S.

Worth County

Westley, G. S., Manly (Camp Forrest, Tenn.)..Major, A.U.S.

Wright County

Aageson, C. A., Dows
Bird, R. G., Clarion (San Diego, Cal.).....Lt. Comdr., U.S.N.R.
Doles, E. A., Clarion (Phoenix, Ariz.)
Leinbach, S. P., Belmond (Farragut Air Base, Idaho)
Missildine, W. H., Eagle Grove (APO 25, San Francisco, Cal.) ....Capt., A.U.S.

(*) Reported missing in action.
(†) Reported killed in action.

WOMAN'S AUXILIARY NEWS

Mrs. Keith M. Chapler, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—Mrs. F. W. Mulsow, Cedar Rapids
President-Elect—Mrs. W. S. Reiley, Red Oak
Secretary—Mrs. A. G. Felter, Van Meter
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THE STORY OF RED CROSS HOME NURSING*

The National Society of the American Red Cross was chartered by Congress in 1905. Three years later Miss Mabel Boardman, secretary of the organization, originated the idea of a Red Cross home nursing course. That same year chapters in the District of Columbia, Brooklyn, and San Francisco pioneered in giving a series of lectures and demonstrations on hygiene of the sickroom, tuberculosis, dietetics, contagious diseases, mother and baby care, and medical and surgical emergencies.

From the very first the value of the program was felt, and outstanding nurses throughout the country gave it their staunch support. In 1913 Miss Jane A. Delano, first director of the Red Cross Nursing Service, collaborated with Miss Isabel McIsaacs, Superintendent of the Army Nurse Corps, in writing a textbook called "Elementary Hygiene and Home Care of the Sick." The book was revised in 1918 and the title changed to "Home Hygiene and Care of the Sick." These titles were concessions to the nurses who feared that the program might detract from the standards of nursing care which their profession was trying to establish.

The following year, after the textbook was introduced, certificates were given in recognition of the time and effort spent in successfully completing the course. The number of classes grew rapidly and Red Cross chapters all over the country found it necessary to set up teaching centers.

During the first World War the demand for the courses exceeded all expectations. "Women in cities, in small villages, from farms, and from isolated mountain homes gathered in all sorts of improvised classrooms to receive their instruction. Classes were held in industrial centers through the noon hour, after factories and stores had closed and in the evenings for those who were employed all day."

Two modifications of the course were developed in 1920. The first permitted science, home economics and physical training teachers to give part of the instruction to students; and the other met the needs of women with limited education and language handicaps. That same year several universities and colleges offered a short course in methods of teaching Red Cross home nursing to assist nurses in preparing themselves for the work.

Following the war there was a drop in the number of adult classes, and school classes took the lead. In 1933 the Red Cross educational program "joined the march" with the adult education movement. Cooperative programs were worked out with local Red Cross chapters and a "new generation" was learning the value of the courses offered by the Red Cross.

In 1940 and 1941, "when war like a peculiarly virulent epidemic was creeping over the world," the demand for adult and community classes greatly increased. "Looking ahead to the problems of meeting the needs of thousands of homes in which professional care would be out of the question for a long time to come, the Red Cross, with the approval of the National Committee on Red Cross Nursing Service, took the first step in streamlining its Home Hygiene and Care of the Sick Program by changing the name of the course to Red Cross Home Nursing."

In 1942 the old textbook which had been a friend to millions of people was retired, and a new one, entitled Red Cross Home Nursing, took its place. This was written by Miss Lona L. Trott, Assistant Director of Health Education, Red Cross Nursing Service. It is an excellent book, well adapted to present day needs and worthy to take the place of its predecessor.

Miss Boardman is still active in Red Cross service. She has had the "enviable satisfaction" of watching her idea "grow and bear fruit" through the years. "None knew better than she that the fruit might literally become the staff of life to uncountable numbers of sick and helpless in the period of history yet to be recorded."

Mrs. R. C. Doolittle

*Information obtained from the Red Cross Home Nursing Story published by the American National Red Cross, Washington, D. C.

BOOK NOTES

"Nerves are God's hell-hounds—but He holds the other end of the leash!"

From time immemorial doctors' offices have been the last resort for multitudes suffering from complaints so numerous that they were often listed in order to remember them. Then, after complete

physical examination, the patients would be angry and incredulous that no major difficulties were discovered, or no operation recommended. THE ANSWER IS . . . YOUR NERVES in which Arnold S. Jackson, M.D., proceeds to show how neurasthenic persons recover only temporarily with various treatments and drift from doctors to quacks and back to doctors again. Often people with incurable diseases have a more hopeful attitude than those first mentioned. The chronic complainer advertises his own neurosis.

From his extensive experience Dr. Jackson shows how the pressure of city life increases nervous tension. Some who claim miraculous cures for this or that were never really ill and required psychology instead of medicine. Others lie about illness to avoid unpleasant circumstances or to achieve their own ends. Then there are those who claim they have no nerves and go on for incredible periods straining themselves to the inevitable breaking point. There are "nerves in the nursery," nervousness due to goiter, and nervousness as a clinical phase of menopause.

Balanced living and religion have a quieting influence on the nervous system and are recommended as the best treatment, because in most cases medicine is useless. Shrewd doctors recognize the essential difference and have trained themselves to offer the proper advice. Actual case histories enhance the value of this book, which is written for both layman and doctor in a most readable fashion.

If you have been hitting the high road at top speed (as nearly all of us are now), THE ANSWER IS . . . YOUR NERVES will show you how to slow up sensibly and save your nervous energy for the things which count most.

Mrs. K. M. Chapler

"WHICH AM I?"*

Are you an active member, the kind that would be missed?

Or are you just contented that your name is on the list?

Do you attend the meetings, and mingle with flock,

Or do you stay at home and criticize and knock?

Do you take an active part and help the work along?

Or are you satisfied to be the kind that "just belong"?

Do you ever go to visit a member who is sick,

Or leave the work to just a few and talk about the clique?

So come to the meeting often and help with a hand and heart—

Don't just be a member but take an active part.

From the West Virginia Club Woman.

*Reprinted from the December, 1942, issue of *The Bulletin.*

SPEAKERS BUREAU ACTIVITIES

Marshall County Medical Society

Cecil C. Jones, M.D., of Des Moines will be the guest speaker at the regular dinner meeting of the Marshall County Medical Society, Tuesday evening, April 6, at six-thirty o'clock. Following the dinner at the Hotel Tallcorn Dr. Jones will discuss Vertigo.

Wayne County Medical Society

Members of the Wayne County Medical Society will convene in Corydon, Tuesday evening, April 13, at eight o'clock for their monthly meeting. A scientific recording, Care of the Premature Infant, by Julius H. Hess, M.D., Chicago, will be included on the program. Numerous slides accompany this recorded medical lecture, which is the tenth and last in a series presented by the Bureau to the physicians of Wayne County.

Hardin County Medical Society

The Hardin County Medical Society will hold its usual meeting at the Princess Cafe in Iowa Falls, Tuesday evening, April 27, at six-thirty o'clock. The program will consist of an address by Clifford D. Winder, M.D., of Waterloo on the subject of Acute Rheumatic Fever.

SCIENTIFIC RECORDING AND FILM

The Speakers Bureau is pleased to announce that a new medical recorded lecture on Pre- and Post-operative Care has been added to its library. The excellent recording by Charles B. Puestow, M.D., of Chicago is accompanied by a sixteen millimeter film. The Bureau will gladly furnish this presentation upon request by any county medical society, hospital staff, or other medical group.

RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.

WOI—Wednesdays at 2:05 p. m.

April 5-7 Cancer
Arthur W. Erskine, M.D.

April 12-14 Measles
Donald M. Harris, M.D.

April 19-21 Obesity
Viola D. Nelken, M.D.

April 26-28 Adapting Point Values to Nutritive Values
Sybil L. Woodruff, Ph.D.

SOCIETY PROCEEDINGS

Black Hawk County

The regular monthly meeting of the Black Hawk County Medical Society was held in Waterloo Tuesday, March 16, at 6:30 p. m. in Black's Tea Room. The scientific program on navy medicine was presented by officers of the United States Naval Training Station in Cedar Falls, including Lieutenant Commander T. B. Marwil, Lieutenant J. Picciochi, and Lieutenant E. R. Sherrin. J. F. Kestel, M.D., President

Des Moines County

The Des Moines County Medical Society held its monthly dinner meeting Tuesday, March 9, in the clubhouse of the Burlington Golf Club. Commander Paul Huber and his staff from the Iowa Pre-Flight School in Iowa City presented the program for the evening.

Grundy County

Officers elected to serve the Grundy County Medical Society during 1943 include: Dr. Varina Des Marias of Grundy Center, president; Dr. Henry L. Mol of Grundy Center, secretary and treasurer; and Dr. Henry W. Clasen of Dike and Dr. Mol, delegates.

Hardin County

The monthly meeting of the Hardin County Medical Society was held in Iowa Falls Tuesday, February 23, at 6:30 p. m. at the Princess Cafe. The guest speaker for the evening was Leslie W. Swanson, M.D., of Mason City, who spoke on Heart Block and Fibrillation.

Jasper County

Members of the Jasper County Medical Society and the Skiff Memorial Hospital staff held a joint meeting in Newton Monday, March 8, to honor Dr. Frank E. Quire of Lynnville and Dr. Frank E. Boyd of Colfax for having completed fifty years in the practice of medicine. The dinner meeting was held at Mason's Cafe. Dr. Raymond F. Frech of Newton, president of the society, presented the men with Fifty Year Club pins of the Iowa State Medical Society, following which they responded with short talks recalling some of their experiences. Dr. James C. Hill of Newton reviewed some of the progress made in medicine during the period covered by the careers of Dr. Quire and Dr. Boyd.

Johnson County

The March meeting of the Johnson County Medical Society was held in Iowa City Wednesday, March 3, at Hotel Jefferson at 6:30 p. m. The scientific program consisted of a paper on Rheumatic Fever in Children by Robert L. Jackson, M.D., of the Department of Pediatrics. The discussion was led by Robert A. Einstein, M.D., also of the University.

A. L. Sahs, M.D., Secretary

Mitchell County

Members of the Mitchell County Medical Society were entertained in Osage Thursday, March 4, by Dr. Thomas G. Walker of Riceville. Following dinner the doctors went to the offices of Drs. John O. and Merrill O. Eiel for their regular business meeting.

O'Brien County

The O'Brien County Medical Society held its annual meeting in the courthouse in Primghar Tuesday evening, February 16. The following officers were elected to serve the society during the year: Dr. Cornelius Maris of Sanborn, president; Dr. Thomas D. Kas of Sutherland, vice president; Dr. Walter S. Balkema of Sheldon, secretary and treasurer; and Dr. Walter R. Brock, delegate.

Polk County

The regular monthly meeting of the Polk County Medical Society was held in Des Moines Wednesday, March 17, in Younkers Tea Room. The scientific program for the evening was a panel discussion on Medical Emergencies. Members of the panel were Benjamin F. Kilgore, M.D., William M. Sproul, M.D., Harold N. Anderson, M.D., and Floyd O. Woodward, M.D., all of Des Moines.

Scott County

The March meeting of the Scott County Medical Society was held Tuesday, March 2, at 6:00 p. m. at the Lend-A-Hand Club in Davenport. The guest speaker for the evening was Ruben Nomland, M.D., Professor of Dermatology and Syphilology of the State University of Iowa College of Medicine in Iowa City, who spoke on Diseases of the Skin. Dr. Nomland illustrated his lecture with lantern slides.

L. J. Miltner, M.D., Secretary

Washington County

The Washington County Medical Society held its monthly meeting in Washington Tuesday, March 16, at the North Side Cafe. Following dinner Theodore J. Greteman, M.D., of the University Hospitals in Iowa City presented a paper on Diagnosis and Management of Low Back Pain. Dr. Greteman illustrated his talk with lantern slides.

W. S. Kyle, M.D., Secretary

Woodbury County

The monthly meeting of the Woodbury County Medical Society was held in Sioux City Thursday, March 18, at 6:30 p. m. at the Mayfair Hotel. The scientific program consisted of an illustrated lecture on The Diagnosis and Management of Low Back Pain by Theodore J. Greteman, M.D., of the University Hospitals in Iowa City, and an outline of the requirements for the medical care of trainees by First Lieutenant Thomas J. Scanio, medical officer of the cadet trainees at Morningside College.

R. T. Rohwer, M.D., Secretary

PERSONAL MENTION

Dr. J. Robert Wright, formerly of Knoxville, has moved to Santa Fe, New Mexico, where he has accepted a position with the New Mexico State Department of Health. Dr. Wright had practiced in Knoxville since 1915.

Dr. Lee R. Woodward of Mason City spoke before the Rotary Club of that city at its meeting Thursday noon, February 25. Dr. Woodward presented the history of the blood bank and also discussed blood transfusion.

Dr. Adrian J. Schroeder of Marshalltown was the guest speaker of the Marshalltown Woman's Club Wednesday afternoon, March 3, at the Binford House in Marshalltown. Dr. Schroeder's topic of discussion was You and Your Blood Pressure.

Dr. Ernest L. Glasscock has been appointed director of district health service No. 9 with headquarters in Burlington. Dr. Glasscock came to Burlington from Kansas City, Missouri, and succeeds Dr. Erwin C. Sage, who resigned to accept a commission as Lieutenant Commander in the United States Naval Reserve.

Dr. Fred Sternagel of West Des Moines addressed the members of the Rotary Club of that city Monday, March 8, on What the Medical Profession Has Contributed to the Present War.

Dr. Frank B. Leffert of Centerville spoke before the Association of Commerce of that city Tuesday noon, March 9. His subject was The Relation of the Medical Profession to the Present War Conditions.

Dr. William Rankin of Keokuk was the speaker for the Lions Club of that city Tuesday noon, March 9. Dr. Rankin discussed Sulfa Drugs.

Dr. Edmund G. Zimmerer of the State Department of Health in Des Moines spoke before the Women's Club of Fort Dodge Tuesday afternoon, March 9, on the Control of Cancer.

AVAILABLE COMMISSION IN IOWA STATE GUARD

The JOURNAL has been requested to announce that a commission in the Iowa State Guard, Medical Detachment, Second Regiment, is available for a doctor of medicine. Any interested physicians should contact Lt. Col. Phil G. Waters, 405A Equitable Building, or Capt. Floyd O. Woodard, 820 Equitable Building, Des Moines, Iowa.

DEATH NOTICES

Becker, Royal August, of Atlantic, aged fifty-six, died March 6 following an illness of several years. He was graduated in 1910 from the State University of Iowa College of Homeopathic Medicine, and at the time of his death was a life member of the Cass County and Iowa State Medical Societies.

Grayston, Jesse Trott, of Cedar Rapids, aged fifty-four, died suddenly March 7. He was graduated in 1913 from the University of Illinois College of Medicine, and at the time of his death was a member of the Linn County Medical Society.

Hand, William Cory, of Hartley, aged sixty-six, died suddenly March 22 following a heart attack. He was graduated in 1906 from Northwestern University Medical School, and at the time of his death was a member of the O'Brien County Medical Society.

Howe, James McPherson, of Hillsboro, aged seventy-three, died March 11 following an illness of several months. He was graduated in 1897 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Henry County Medical Society.

McMahon, George Thomas, of Waukee, aged eighty-two, died February 22 after a heart attack. He was graduated in 1895 from Drake University College of Medicine, and at the time of his death was a member of the Dallas-Guthrie Medical Society.

Harlan, Martin Edward, of Onawa, aged thirty-two, has been reported drowned in action on February 20 while serving in the Pacific as a Lieutenant in the United States Naval Reserve. He was graduated in 1938 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Monona County Medical Society.

History of Medicine in Iowa

Edited by the Historical Committee

Dr. Frank M. Fuller, Keokuk
Dr. Paul E. Gardner, New Hampton
Dr. John T. McClintock, Iowa City
Dr. Henry G. Langworthy, Dubuque
Dr. Walter L. Bierring, Des Moines

A History of Medicine in Plymouth County

Wendell L. Downing, M.D.,
Le Mars, Iowa

(Continued from last month)

Dr. George Mauer of Le Mars was born in Le Mars, May 18, 1885. In 1912 he was graduated from the University of Iowa College of Medicine. After being located in Meriden, Iowa, from 1913 until 1926, Dr. Mauer located in Le Mars where he is now in practice. In 1913 he was married to Albia Kas of Washington, Iowa. The Mauers have three children, Norman, D.D.S., Le Mars, Naval Medical Corps; Evelyn, teacher, Mallard, Iowa; and Betty, a freshman at the University of Iowa. Dr. Mauer is a member of the New England and Iowa Gladiolus Societies.

Dr. Peter Meis of Omaha was born October 24, 1901, in Oyens, Iowa. In 1926 he was graduated from the University of Iowa College of Medicine, and after serving an internship at Holy Cross Hospital in Salt Lake City, he located in Le Mars in 1927. After several years of practice he retired because of ill health. With his wife and six children, he now lives in Omaha.

Dr. Ames Nasland was born in Eveleth, Minnesota, in 1901. After graduating from the University of Minnesota Medical School in 1926, he was an intern for one year at the Minneapolis General Hospital. For one year, 1927 to 1928, he was associated with the Le Mars Clinic. Dr. Nasland then took up postgraduate work in roentgenology at the State University of Iowa College of Medicine during 1929 and 1930 and at Dr. Lewis Cole in New York from 1930 to 1935. He was an assistant roentgenologist at French and St. Vincent's Hospital during the latter years. Since 1935 Dr. Nasland has been in private practice in roentgenology in Minneapolis. He is now the roentgenologist at the St. Barnabas and Shriners Hospitals and is clinical assistant in roentgenology at the University of Minnesota Medical School. Among his memberships are those in the Radiological Society of North America, American College of Radiology, and he is a Diplomate of the American Board of Radiology. In 1939 he was married in St. Paul. Since 1941 he has been on active duty with the Naval Medical Corps and at the time of the last report was stationed at March Field, California.

Dr. Harold W. Powers of Topeka, Kansas, was born January 6, 1903, in Emmetsburg, Iowa, the son of Dr. Henry Powers (Iowa, 1882) and the brother of Dr. Henry R. Powers (Rush, 1919) of Emmetsburg. He received his Bachelor of Arts degree from the University of Iowa in 1923 and his degree in medicine from the College of Medicine in 1927. After an internship at the Cincinnati General Hospital, he was associated with the Le Mars Clinic from 1928 until 1929. From 1929 until 1932 he was a resident in otolaryngology at the University of Iowa and in ophthalmology at the University of Rochester. Since 1932 Dr. Powers has practiced his specialty in Topeka. In 1932 he was married to Ann McArthur of Boulder, Colorado, and they have two children. He is now on active duty with the Army Medical Corps with the rank of Major.

Dr. Laurence C. O'Toole of Le Mars was born in Eagle Grove, Iowa, August 12, 1903. His father is Dr. Thomas J. O'Toole of Eagle Grove (Nebraska, 1896) and his brother, Dr. Roger L. O'Toole (Iowa, 1935) is a Major in the Army Air Corps. He received his Bachelor of Arts degree from Loras College in 1924 and was graduated in 1928 from the University of Iowa College of Medicine. After a year's internship in Harper Hospital, Detroit, he located in Le Mars in 1929 and has since been associated with the Le Mars Clinic. He is a member of Nu Sigma Nu fraternity and has been secretary of the Plymouth County Medical

Society since 1929. Since 1939 he has been a member of the Le Mars School Board. In 1930 Dr. O'Toole was married to Magdelene Hoffman of Le Mars. They have four children: Mary, Larry, Ann and Tim. Dr. O'Toole limits his work largely to obstetrics and internal medicine.

Dr. Hubert H. Burroughs of Sioux City was born May 16, 1908, in Bethel, North Carolina. He was graduated in 1933 from the University of Pennsylvania School of Medicine and served a one year's internship in St. Joseph Mercy Hospital in Sioux City. From 1934 until 1937 he was located in Le Mars; since that date he has continued in practice in Sioux City. He is now on active duty in the Medical Corps of the United States Naval Reserve. In 1934 Dr. Burroughs was married to Dorothy Bowers of Sioux City. They have three children, two boys and a girl.

Dr. Roman J. Fisch of Le Mars was born in Oyens, Iowa, in May, 1907. He obtained his Bachelor of Science and Doctor of Medicine degrees from Creighton College, obtaining the latter in 1931. For one year he interned at St. Joseph's Hospital in Omaha, after which he was a C.C.C. camp surgeon for two years. In 1932 and 1933 he was a resident in the Douglas County Hospital in Omaha. Since 1935 Dr. Fisch has been in practice in Le Mars, four years of which were spent in association with Dr. S. A. Carnazzo. He is a member of Phi Chi medical fraternity. He was married in 1934 to Hildagarde Schaecker, R.N., of Lindsay, Nebraska. Dr. Fisch and his wife have three children, a girl, Ann, and two boys, John and Thomas.

Dr. Sebastian A. Carnazzo of Monterey, California, was born in Omaha in September, 1907. He received his Bachelor of Science and Doctor of Medicine degrees from Creighton University, obtaining the latter in 1931. Dr. Carnazzo was then an intern for one year at St. Joseph's Hospital in Omaha. For one year he was in practice in Omaha and from 1933 to 1935 he was a C.C.C. camp surgeon at Eugene, Oregon. From 1935 to 1940 Dr. Carnazzo was associated with Dr. Fisch in Le Mars. He then moved to Monterey, California, to be associated with his brother. He was married in 1931, and he and his wife have three children.

Dr. Clifford V. Allen of Longview, Washington, was born in Akron, Iowa, on March 25, 1908. He was graduated in 1933 from the University of Iowa College of Medicine. After an internship of one year in San Jose Hospital in San Jose, California, he was located in Merrill, Iowa, for one year. Dr. Allen was then associated with the Le Mars Clinic for one year. In 1936 he joined the United States Public Health Service and was stationed at the McNeil Prison, McNeil, Washington. In 1938 he moved to Longview, Washington, where he has since been associated with the Columbia Clinic. In 1934 Dr. Allen was married to Helen Simms, R.N., of San Jose.

Dr. Harry L. Vander Stoep of Le Mars was born April 14, 1910, in Sioux Center, Iowa. In 1934 he received his Bachelor of Science degree from the University of South Dakota where he was a member of Alpha Epsilon fraternity. In 1936 he was graduated from the University of Iowa College of Medicine, after which he served an internship at the County Hospital in Lincoln, Nebraska. Since 1937 Dr. Vander Stoep has been associated with the Le Mars Clinic. After taking postgraduate work in radiology at the Cook County Hospital in 1941, he has been in charge of the x-ray work at the Sacred Heart Hospital and the Le Mars Clinic. In July, 1940, Dr. Vander Stoep was married to Eileen Lenihan of Le Mars and they have one daughter, Racheal.

Dr. Clifford V. Bowers of Le Mars was born in Granville, Iowa, on October 6, 1911. He later lived in Sioux City where he was graduated from Central High School. He then attended the University of Iowa where he received his Bachelor of Arts degree in 1933 and his Doctor of Medicine degree in 1935. From 1935 until 1938 Dr. Bowers was intern and surgical resident at the Jersey City Medical Center. He is a member of Nu Sigma Nu fraternity. Since 1938 Dr. Bowers has been located in Le Mars.

Dr. Frederick C. Bendixen of Le Mars was born in Gilmore City, Iowa, on October 6, 1893. He attended the University of Iowa from 1914 until 1920, obtaining his Bachelor of Science and Doctor of Medicine degrees, the latter in 1920. Dr. Bendixen then practiced in Bismarck, North Dakota, with the Roan-Stromas Clinic for eighteen months; in Bellevue, Iowa, for a similar period; and in Ireton, Iowa, for sixteen years. In October, 1939, Dr. Bendixen moved to Le Mars where he now practices. He is a member of Alpha Omega Alpha and Sigma Xi and the American Legion. In 1920 he was married to Mildred Morey, and they have one daughter, Donna, a high school student.

(To be continued next month)

CHANGE OF ADDRESS

Help your central office to maintain an accurate mailing list. Send your change of address promptly to the Journal, 505 Bankers Trust Bldg., Des Moines, Iowa.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ATHLETIC INJURIES: PREVENTION, DIAGNOSIS AND TREATMENT—By Augustus Thorndike, M.D., associate in surgery, Harvard Medical School. Second edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, $3.00.

MEDICAL PARASITOLOGY—By James T. Culbertson, assistant professor of bacteriology, College of Physicians and Surgeons, Columbia University. Columbia University Press, New York, 1942. Price, $4.25.

THE 1941 YEAR BOOK OF PHYSICAL THERAPY—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1941. Price, $3.00.

THE 1941 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—Edited by Joseph B. DeLee, M.D., professor of obstetrics, University of Chicago Medical School; and J. P. Greenhill, M.D., professor of obstetrics and gynecology, Loyola University Medical School. The Year Book Publishers, Chicago, 1942. Price, $3.00.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY—By Jerome E. Andes, M.D., director of department of health, University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, $4.00.

PEDIATRIC GYNECOLOGY—By Goodrich C. Schauffler, M.D., assistant clinical professor of obstetrics and gynecology, University of Oregon Medical School. The Year Book Publishers, Chicago, 1942. Price, $5.00.

STARLING'S PRINCIPLES OF HUMAN PHYSIOLOGY—Edited and revised by C. Lovatt Evans, D.Sc., Jodrell professor of physiology in University College, London; the chapters on the special senses revised by H. Hartridge, M.D., professor of physiology at St. Bartholomew's Medical College. Eighth edition. Lea and Febiger, Philadelphia, 1941. Price, $10.00.

SYNOPSIS OF ALLERGY—By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, $3.00.

ENCEPHALITIS: A CLINICAL STUDY—By Josephine B. Neal, M.D., clinical professor of neurology, College of Physicians and Surgeons, Columbia University. Grune and Stratton, New York, 1942. Price, $6.75.

ADVANCES IN PEDIATRICS—Edited by Adolph G. De Sanctis, M.D., New York Post Graduate Medical School and Hospital, Columbia University. Volume I. Interscience Publishers, Inc., New York, 1942. Price, $4.50.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES—By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, $4.50.

WAR MEDICINE—Edited by Winfield Scott Pugh, M.D., Commander (M.C.) U.S.N., Retired; formerly surgeon, City Hospital, New York. Philosophical Library, Inc., New York, 1942. Price, $7.50.

FRACTURES—By Paul B. Magnuson, M.D., associate professor of surgery, Northwestern University Medical School, attending surgeon, Passavant Memorial Hospital and Wesley Memorial Hospital, Chicago. Fourth edition, revised. J. B. Lippincott Company, Philadelphia, 1942. Price, $5.50.

OVARIAN TUMORS—By Samuel H. Geist, M.D., attending gynecologist, Mount Sinai Hospital; clinical professor of gynecology, College of Physicians and Surgeons, Columbia University. Paul B. Hoeber, Inc., New York, 1942. Price, $10.50.

ELECTROTHERAPY AND LIGHT THERAPY—By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. Fourth edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, $8.00.

BOOK REVIEWS

CLINICAL ANESTHESIA

By John S. Lundy, M.D., head of section on anesthesia, Mayo Clinic; professor of anesthesia, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota. W. B. Saunders Company, Philadelphia, 1942.

In the preface of his new book, *Clinical Anesthesia*, Dr. Lundy states that it was written primarily as a textbook to be used in teaching anesthesia at the Mayo Clinic. The author's many years as head of the department of anesthesia in Rochester have given him the opportunity for an exhaustive study of all methods of anesthesia and these observations have been incorporated in this excellent volume.

The book is profusely illustrated and also contains many diagrams, tables and charts which help to explain the various technics Dr. Lundy uses in his own practice. The text is very readable and easily understood.

In the front of the book is a complete and minutely detailed outline of the various chapters. Those devoted to regional, spinal, and intravenous anesthesia will interest a great many readers, while sections on preoperative and postoperative care of the patient and on intravenous therapy are both timely and important. Whether the book is used as a textbook or chiefly for reference work, it will be indispensable to the anesthetist and should be of value to all physicians.

The reviewer believes that *Clinical Anesthesia* is probably the best work on anesthesia published to date. J. C.

ACCIDENTAL INJURIES

By Henry H. Kessler, M.D., attending orthopedic surgeon, Newark City Hospital. Second edition, enlarged and thoroughly revised. Lea and Febiger, Philadelphia, 1941. Price, $10.00.

In the ten years since publication of the first edition of this book, compensation insurance for the injured workman has expanded considerably. Added to this, compensation of occupational diseases has been adopted by an increasing number of states. Dr. Kessler, in his capacity of medical director of the New Jersey Rehabilitation Clinic, is eminently qualified to discuss these subjects with authority.

This second edition, although maintaining the format of its predecessor, is amplified by eighty-six pages of text and nearly fifty illustrations. A collaborator, Dr. Andrew Rados, has been included on the section dealing with injuries to the eye. The charts and statistical recordings of the tables of rates in various states are of great value. Throughout the text, illuminating case reports of court actions serve to give a clear understanding of the difficulties which may be encountered. A voluminous bibliography concludes each chapter and enables the reader to find further references on the subject covered in the text.

In present day practice, nearly every physician has some compensation work. This volume is highly recommended to the profession as an aid in solving the complexities of care of compensation cases, both accidental and medical, and the evaluation of resulting disabilities. D. C.C.

SYNOPSIS OF DISEASES OF THE HEART AND ARTERIES

By George R. Herrmann, M.D., professor of medicine, University of Texas. Second edition. The C. V. Mosby Company, St. Louis, 1941. Price, $5.00.

This small book is presented by an able author who has given a good synopsis of cardiovascular diseases. As the title implies, emphasis is placed only upon the essentials, including generally accepted facts, without entering into a detailed discussion of controversial subjects. The diagnosis and treatment of cardiovascular diseases are stressed.

The chapter on electrocardiography is well presented. Considerable new material has been added in this second edition. There is an excellent section on peripheral vascular diseases. A chapter on the methods outlined by the military authorities for the examination of soldiers is also included.

The reviewer concurs with the opinion of the author that "this guide should foster interest and proficiency in cardiovascular diagnosis and treatment and should be of help to the hard-pressed student and to the busy practitioner." M. J. R.

SEROLOGY IN SYPHILIS CONTROL
Principles of Sensitivity and Specificity

By Reuben L. Kahn, D. Sc., Director of Clinical Laboratories and of Serologic Consultation Service, University of Michigan Hospital, Ann Arbor. Williams and Wilkins Company, Baltimore, 1942. Price, $3.

Too long, now, syphilis has been diagnosed, treated and pronounced cured on the basis of a "slip of paper," more commonly known as the laboratory report. Some years ago this might have been good enough, because in most cases a diagnosis had already been made on the basis of the physical findings of the patient and all that was needed was a positive serologic test to confirm the diagnosis. With the increased use of serology as a part of a general physical examination, physicians have begun to realize that the serologic tests for syphilis are not the highly specific things they had supposed them to be, and that they are by no means "fool proof." The physician has asked the laboratory time and time again to tell him if a particular positive test means that his patient has syphilis, only to be told that the laboratory cannot possibly answer his question but that he must derive his answer from a comparison of the serologic report and the physical findings of his patient. But the patient has no physical findings. At this point the physician enters a state of serologic confusion. When he attempted to find what he was looking for in the maze of medical writings, he was confronted with such terms as "sensitivity" and "specificity," neither of which were clearly defined for him; his confusion became complete and he stumbled around in serologic chaos.

If a physician did not read another word of medical writing for the rest of the year, he should not miss reading Dr. Kahn's discussion of "sensitivity" and "specificity" and their relationship to each other. His discussion on both these subjects is worth the price of the book, and one who would interpret a serologic report in terms of his patient's physical inventory must have a clear concept of both.

This book is not a laboratory manual but a frank and scientific discussion of the principles of serology. Dr. Kahn deserves much credit for giving us a sincere and honest discussion of serologic interpretation to enable every one of us to better understand a serologic report and for having taken us several steps out of our serologic chaos. R. M. S.

HEALTH EDUCATION OF THE PUBLIC

By W. W. Bauer, M.D., Director, Bureau of Health Education, American Medical Association; and Thomas G. Hull, Ph.D., Director, Scientific Exhibit, American Medical Association. Second edition, revised. W. B. Saunders Company, Philadelphia, 1942. Price, $2.75.

The authors of this book are certainly not to be numbered among those who talk about public health education but who do nothing about it. After stating their objectives and giving ideas as to the sources of materials, they go into discussions of the most effective use of the radio, exhibits, pamphlets, newspapers, motion pictures, slides, magazines, books, and correspondence. A section is devoted to the relative values of the various means of public health education and how the technics may be correlated. How the public health program itself can be used as a yardstick for measuring the effectiveness of public health education is discussed in another section.

Each of the sections already mentioned was included in the first edition, and has been brought up to date and modernized to include the newest available in each of the facilities discussed. In addition, two chapters have been added: one on training and qualifications and another called "A Philosophy of Health Education" which furnished a very fitting close to a fine book.

Every health officer, public health nurse, public health engineer, in fact, anyone interested in bringing health facts to the public will find hundreds of worthwhile suggestions in this book. We hope it can be read by each one of them. R. M. S.

The annual session of the Iowa State Medical Society will be held in Des Moines April 29 and 30. Plan now to attend, and make hotel reservations early.

The JOURNAL of the Iowa State Medical Society

VOL. XXXIII DES MOINES, IOWA, MAY, 1943 No. 5

THE PRESIDENT'S ADDRESS*

FRANK P. WINKLER, M.D., Sibley

The Ninety-second Annual Session of the Iowa State Medical Society comes at a time of a great crisis in the history of our state and nation. In addressing you upon this occasion, I feel it my responsibility to present the problems which are of both local and national interest, as they pertain to American Medicine.

The medical profession is conscious of great social and medical changes ahead. We have reached a high level in medical education in this country after fifty years of unceasing effort by the American Medical Association. In fact, we are now credited with having the highest standards of medical education in the world. This may seem boastful, but I assure you that there is much evidence to substantiate this statement. In the future the world will look to us to lead in post-graduate work in medicine and other educational lines.

During this war the medical profession is being subjected to a severe test. It rests with us to decide what is important and what is not important. The significance of maintaining and, if possible, of increasing the supply of physicians was recognized at the beginning of the program of national mobilization and military training. The medical schools responded promptly to this need by recommending through the American Medical Association, and other organizations, that the graduation of physicians be accelerated by the discontinuance of vacations, and that medical schools increase their enrollment as much as their facilities would permit without reducing the quality of medical education. It is my firm conviction, and also the opinion of 95 per cent of the medical profession of this country, that we must not be misguided by those advocates who would sacrifice much of the ground we have gained in the past half century in order to make a large army of men and women into half-educated Doctors of Medicine, to be licensed by the various state and national boards, to practice medicine following this war, and in this way reduce the present medical standards of this country to that now existing in much of the war-torn countries of Europe.

There are a number of individuals in high government positions in Washington who are very hostile to organized medicine. These men are making every effort to lower the standards of medical training. They are advocating the admission of men and women from high school, which would put us back at least fifty years in pre-medical training. They are also recommending two years for the medical curriculum, which would, if they are successful, place us back in the 1880's. It seems to me that organized medicine should use all its efforts and influence to prevent improperly trained physicians from flooding our country.

You instantly realize that a two-year medical course would put us on a status lower than that of the cults we decry at the present time. This shortened course would about double the number of so-called doctors being turned out each year. It is up to us on the home front to protect the doctors now serving with the armed forces, and to see that their places are not usurped by those who could not qualify for government service.

The medical profession is conscious of social and economic changes and stands ready to cooperate with, and offer leadership to, state and federal agencies in the solution of medical problems. It further believes that better medical services can be rendered by offering advice and leadership to welfare agencies rather than to have them serve as a tool under political bureaus.

The medical profession recognizes the necessity of state and federal control of communicable diseases and medical services to inmates of state and federal institutions. It appreciates its responsibilities to the armed forces and expects to supply the needed personnel. It is willing to cooperate with

*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.

welfare agencies in providing adequate medical care for the low income and indigent groups; but in providing this care, it believes that the medical service is augmented when the patient-physician relationship can be maintained by permitting the patient, whenever possible, to choose his own physician in order to protect the public from worthless procedures and unnecessary operations by unscrupulous individuals. It likewise believes that high standards of medical education and practice must be maintained. This applies not only to the practice of medicine in the office; it applies to the practice of medicine in the humble home, or the most modern hospital.

Our present state laws governing the practice of medicine and conduct of physicians protect the public from irregular practices. In some states the administrative and legislative bodies have the confidence of the medical profession; likewise, the medical profession has the confidence of the state administrative and legislative bodies. This confidence has made it possible for representatives of both groups to attack and solve the medical problems which are of mutual interest. It is our duty as physicians and citizens to assure those in administrative positions and legislative bodies that we are familiar with the social and economic changes which have thrown greater responsibilities on the medical profession; and that we stand ready to cooperate with these agencies in offering leadership in the solution of the numerous problems which non-medical personnel are trying to solve. Industrial compensation has accomplished much in providing proper medical care and the necessities of life, during illness, for those employed in industrial institutions; however, there still remain many individuals who receive moderate or low incomes and are desirous of securing the assurance of adequate medical service in the event of illness. Insurance companies have offered this protection through policies covering accident and illness disabilities, but this protection only partially solves the problem. In the March issue of *Hospital Management,* Kenneth C. Crain quotes the following: "A nationwide survey reveals overwhelming opposition to the proposed expansion of the Social Security Plan to cover hospitalization and a corresponding opinion that the voluntary 'Blue Cross' plan can meet the need for Hospital Insurance."

Dr. C. W. Munger, with the American Hospital Association, informs us that there are at the present time ten million members in the Blue Cross plan, and it is his opinion that there should be not less than forty million. It is obvious that there are great differences of opinions as to the kind of social insurance necessary to cover all our present needs. The functions of acquainting the public on matters of medical interest, assisting bureaus in formulating plans on medical care, and offering constructive advice on proposed medical legislation, rightfully belong to the American Medical Association, or they might even be undertaken by unifying the activities of the various state committees on public policy and legislation.

The Iowa Procurement and Assignment Committee, augmented by the National Procurement and Assignment Office, has done a splendid job. From January 1, 1942, to June 1, 1942, physicians were certified directly to the procurement and assignment service in Washington. Enlistment on a purely voluntary basis was not providing a sufficient number for the armed forces. In cooperation between the Procurement and Assignment Service, War Department, Navy Department, Surgeon General's Office, Selective Service, and War Manpower Commission, recruiting boards were sent to each state and an active program of recruitment of physicians was carried on.

The Iowa Board discontinued activity about November 1, 1942. The latest figures show that we here in Iowa provided 127 per cent of our quota by December 1, 1942. Many states, including New York, reached only about 80 per cent of their quota. This speaks well for Iowa physicians. To date figures show that Iowa has seven hundred and thirteen doctors in the armed forces. When Brigadier General Fred W. Rankin, former president of the American Medical Association and now associated with the Surgeon General's Office, recently spoke to the medical graduates of Temple University, he said the armed forces had taken 40 per cent of the nation's effective medical personnel.

The medical profession from the Revolutionary War down to the present war has always responded promptly and voluntarily when its services were needed. Under date of March 9, 1943, I received the following figures from the War Department:

Medical Corps Officers in Service

Civil War	18,343
Spanish American War	877
World War I	33,091
World War II (to January, 1943)	36,000

More recent figures show a total of 38,000 in the Army, and 8,000 in the Navy. This is an outstanding record. There will, however, be still greater demands made on the medical profession before the present war is ended; but whatever the demands may be, we shall continue to meet them with the same spirit and efficiency in the future as we have in the past.

No, the doctors of this country need not be regimented. Since the courts have ruled that Group Health is a business, however, and since they have found that medical societies are guilty of restraining trade when attempting to maintain the present standards of the practice of medicine, a challenge has been issued to the medical profession. Is there a necessity for lay groups and the federal government to take over the control of the practice of medicine? Are the Doctors of Medicine no longer able to conduct the practice without government control? Do they lack ability to appreciate their problems, or are they incapable of constructive leadership in the solution of the numerous responsibilities which are confronting the profession today? I say emphatically, *NO!*

ALLERGY

Principles of Diagnosis and Treatment*

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The various manifestations of allergy present an important problem of diagnosis and treatment in all branches of medicine, since almost any structure in the body may be involved. There is definite evidence that the incidence of allergy among the general population is increasing. In recent years greater contact with industrial dusts, house and automobile dusts, atmospheric molds and pollens has increased the incidence of respiratory allergy. The exposure to the massive atmospheric concentration of ragweed pollen, especially in the central states area, is inducing more and more cases of hay fever. Cross country travel in the automobile and the custom of going in and out of ragweed areas during the period of maximum pollination result in even greater massive exposure. After the onset of ragweed hay fever, other sensitivities such as those to dusts and foods are frequently added; consequently, the patient develops other manifestations of the disease. Contact dermatitis has become more common because of greater contact with a variety of chemical substances especially in the industries. Sensitivity to various drugs, vaccines, serums and endocrine products is not uncommon.

The solution of the problem of diagnosis and treatment is dependent primarily upon a complete clinical history, physical and laboratory examinations, including diagnostic skin tests. From the clinical history it is important, first, to determine whether one or more manifestations of allergy are present. The most common manifestations to be considered are:

Group I. Perennial nasal and sinus allergy, allergy of the eye and ear, hay fever, allergic bronchitis, and bronchial asthma.

Group II. Gastro-intestinal allergy, allergy of the salivary glands, allergic headache, urticaria, angioneurotic edema and eczema.

Group III. Serum disease.

Group IV. Contact dermatitis.

The general practitioner has the occasion to deal with all these various manifestations while the specialist may see only those which are concerned with his particular field. Not infrequently the patient has more than one manifestation, but he usually consults someone about that manifestation which dominates the clinical picture. The otolaryngologist, therefore, is particularly concerned with those manifestations listed in Group I, although one or more of those in Group II may be associated. The internist has occasion to observe especially those patients in Group I with bronchitis and asthma and those in Group II. Although the pediatrician may contact patients in all groups, most of them fall in Groups I and II. The dermatologist is concerned with the skin allergies in Group II and contact dermatitis of Group IV. It is important that each specialist recognize those associated manifestations which are not primarily concerned in his specialty.

From the standpoint of the otolaryngologist, it should also be emphasized that the ear may be involved by the allergic reaction. In the auditory canal and on the auricle, eczema and contact dermatitis are not uncommon. Although allergic otitis media has been described, there is still some question as to whether or not this is possible since among those cases reported eosinophils in the discharge have not been noted. In some cases of nasal allergy we have noted involvement of the eustachian tube with symptoms of tubal obstruction, including deafness. The cochlea and labyrinth may also be involved. In certain cases of Ménière's disease, allergy has been found to be the cause of symptoms. Auditory nerve deafness as a complication of serum disease has been reported by Cutter.[1] As a matter of fact, all the cranial nerves, individually or collectively, have been reported as paralyzed as a complication of serum disease.

It has recently come to our attention that allergy may affect the salivary glands. During the past three years five cases have come under our observation. In 1935 Pearson[2] reported seventeen cases of allergy of the parotid gland and in 1936 two more cases were added.[3] Rowe reported one case in which the submaxillary gland was involved. Allergy of the parotid gland is characterized by the appearance of unilateral or bilateral painless swell-

*Presented before the Ninety-first Annual Session, Iowa State Medical Society, Des Moines, April 15, 16 and 17, 1942.

ings. The swelling may subside upon massaging Stensen's duct from which a thick mucous plug containing eosinophils may be expressed. Pearson injected the ducts with lipiodol, then by means of the roentgenogram showed that there was a dilatation of the ducts. The swelling of the gland, therefore, is the result of obstruction of Stensen's duct rather than edema of the gland. Allergy of the parotid gland is usually associated with other manifestations and is generally caused by foods. Pearson reported two cases in which the swellings were associated with attacks of asthma. In children they not infrequently occur with attacks of abdominal pain or colic. In some instances, secondary infection in the gland may complicate the allergic process.

In children as well as in adults, allergy must be differentiated from recurring head colds. The tonsils and adenoids are often removed in children for the relief of frequent colds and bronchitis when the cause of the symptoms may be due to allergy rather than to infection.[4] In a group of 200 children who were routine candidates for removal of the tonsils and adenoids we[5] found an incidence of respiratory allergy of 13 per cent. Chronic cough in children often precedes asthma; therefore, allergy must always be considered as a possible cause.

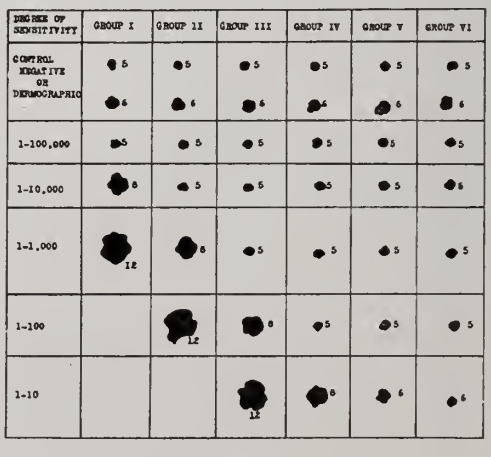
The diagnosis of respiratory allergy can usually be established without difficulty upon the basis of the clinical history and the physical examination.[6 and 7] In dealing with the nose and paranasal sinuses, however, there should be an additional correlation of the cytologic examination of the secretions and the x-ray and bacteriologic findings. This plan of diagnosis should also be employed in the management of bronchial asthma. The cytologic examination of the nasal and bronchial secretions is important not only from the diagnostic standpoint but also from the viewpoint of determining the presence or absence of complicating infection. In uncomplicated cases the secretions show a pure eosinophilia. With secondary chronic infection there is usually a mixture of eosinophils and neutrophils. During an acute cold or in the presence of chronic suppuration, the neutrophils predominate the cytologic picture. If severe, the eosinophilia may completely disappear. This is particularly true during the active stage of an acute cold. The eosinophilia returns with the subsidence of the infection. Cytologic examinations are important in determining whether an acute exacerbation of symptoms is caused by allergic reaction or by the presence of infection. They are also a guide, therefore, in the treatment of the immediate symptoms. Chronic allergic cough in the absence of definite nasal symptoms or asthma may be diagnosed only on a cytologic basis. From the standpoint of the x-ray examination, a diagnosis of acute or chronic sinusitis should not be made without the correlation of the cytologic findings.

Before adopting any definite plan of treatment of the allergic patient it is important primarily to determine which manifestations of the disease are present. In general, it may be stated that the type or types of allergy present give some clew as to the cause of symptoms. For example, the respiratory allergies listed in Group I are in the majority of cases caused by inhalant substances such as pollens, atmospheric molds, house dust, occupational dust, cosmetics, or animal emanations. Only in a small percentage of cases is food a factor if respiratory allergy only is present. Those manifestations listed in Group II are caused almost exclusively by ingested substances such as foods and sometimes drugs. The coexistence of Group I and Group II manifestations indicates that both inhalant and food factors play a part. Food is rarely the sole cause of respiratory allergy.

In the determination of the etiologic factors, the information derived from skin tests should be correlated with the clinical history. In the case of the pollen allergies they are very reliable, but in the inhalant and food cases they may or may not be of value. Inhalant or respiratory allergy such as the house dust type, for example, may be present with negative skin reactions. In these cases

CHART I

TITRATION OF DUST SENSITIVITY



dust therapy should be employed. Likewise, in the food cases skin tests may be unreliable. Therefore, some type of elimination diet must be employed to determine the causative factors.

In some instances the clinical history alone may reveal the inhalant and food factors, the avoidance

or elimination of which may result in the satisfactory relief of symptoms.

In the management of respiratory allergy certain prophylactic measures should be instituted as a routine procedure. Pillows and mattresses should be enclosed in dust proof encasings. The household should be kept as meticulously free of house dust as possible. The nonallergic type of cosmetics should be used. Household pets should be eliminated. A change of occupation or residence may be indicated in some instances. If the removal or avoidance of inhalant factors is not possible or is insufficient to give satisfactory relief, treatment by the injection of an extract of the offending substance is indicated. In some cases injection therapy must be used in conjunction with food avoidance.

Among the inhalant allergies, exclusive of hay fever, house dust is the most common cause.[8] Autogenous house dust or a well compounded stock dust extract may be employed. In those instances in which some specific dust is the factor, an extract of it should be used. In some cases equal parts of autogenous house dust or stock house dust and the specific dust must be combined to insure added protection or to produce satisfactory relief.

PREPARATION AND ADMINISTRATION OF DUST EXTRACTS AND OTHER ANTIGENS

The following instructions for the dilution, titration of skin reactions, and the administration of stock dust are also applicable for related antigens such as autogenous house or occupational dusts, animal danders, orris root, pollens, or for foods. Concentrated stock dust or other antigens may be extracted with glycero-saline (glycerine 50 per cent, buffered saline 50 per cent) or Coca's solution. All dilutions are made with Coca's solution (phenol 4 grams, sodium bicarbonate 2.75 grams, and sodium chloride 5 grams per 1,000 cubic centimeters of distilled water). Extracts must be sterilized by Seitz or Berkefeld filtration.

The concentrated stock dust or other antigen may be diluted as follows: 1:10, 2 cc.; 1:100, 5 cc.; 1:1,000, 10 cc.; 1:10,000, 10 cc.; 1:100,000, 10 cc.; 1:1,000,000, 5 cc.; 1:10,000,000, 5 cc. It may be diluted in larger quantities if necessary. Fresh dilutions should be prepared every thirty days since there is a loss of potency upon dilution and standing. Solutions should be kept in a refrigerator if possible, otherwise they should be stored in a dark, cool place.

The degree of skin sensitivity is determined by the intracutaneous method. About 0.02 cubic centimeter of extract is injected, making a wheal about 3 millimeters in diameter. For this purpose we use a 1 cubic centimeter graduated tuberculin syringe, 26 gauge needle, 5/8 inch long. Tests should be made first with the 1:100,000, 1:10,000, and 1:1,000 dilutions and compared with a control of Coca's solution (Chart I). In very sensitive patients, such as those in Group I, additional tests should not be applied. In moderately sensitive patients, such as those in Group II, the 1:100 dilution may be added. In less sensitive patients, such as those in Group III, the 1:100 and 1:10 dilutions may be added.

In patients with good reacting skins the titration reactions are a reliable index of sensitivity, but in poorly reacting skins the reactions are less reliable. In dermographic skins there may be a slightly positive reaction to the control, in which instance all dilutions will show some reaction. If, for example, in Group I, a dermographic reaction occurs to the control and the 1:100,000 shows the same size wheal, then the latter is also a dermographic reaction and not a positive reaction. On the other hand, the patient may be more sensitive clinically than the skin reaction indicates.

TABLE I
TREATMENT BY SUBCUTANEOUS INJECTIONS
Starting with Five to Seven Day Intervals

1. 0.10 cc. 1-100,000	18. 0.45 cc. 1-10,000
2. 0.15 cc. 1-100,000	19. 0.50 cc. 1-10,000
3. 0.20 cc. 1-100,000	20. 0.05 cc. 1-1,000
4. 0.25 cc. 1-100,000	21. 0.10 cc. 1-1,000
5. 0.30 cc. 1-100,000	22. 0.15 cc. 1-1,000
6. 0.35 cc. 1-100,000	23. 0.20 cc. 1-1,000
7. 0.40 cc. 1-100,000	24. 0.25 cc. 1-1,000
8. 0.45 cc. 1-100,000	25. 0.30 cc. 1-1,000
9. 0.50 cc. 1-100,000	26. 0.35 cc. 1-1,000
10. 0.05 cc. 1-10,000	27. 0.40 cc. 1-1,000
11. 0.10 cc. 1-10,000	28. 0.45 cc. 1-1,000
12. 0.15 cc. 1-10,000	29. 0.50 cc. 1-1,000
13. 0.20 cc. 1-10,000	30. 0.05 cc. 1-100
14. 0.25 cc. 1-10,000	31. 0.10 cc. 1-100
15. 0.30 cc. 1-10,000	32. 0.15 cc. 1-100
16. 0.35 cc. 1-10,000	33. 0.20 cc. 1-100
17. 0.40 cc. 1-10,000	

After optimum dosage is reached, gradually increase the intervals between injections to 10, 14 and 21 days.

Most satisfactory results are dependent upon optimum dosage. Poor results are usually due to starting with a dilution which is too strong or overstepping the tolerance with a dosage which is too high. Therefore, the increase may be too rapid or optimum dosage may be overstepped. According to the schedule in Table I, it should be noted that, for example, the thirteenth dose is twenty times stronger than the first. Maximum dosage is optimum dosage, or the one which gives satisfactory relief. When this point is reached, an increase in the intervals between treatments to ten days, then fourteen days, and finally twenty to thirty days should be tried without increasing the dosage. If the intervals cannot be increased, then one or two higher doses may be given. The optimum dose may be higher, and in other instances lower, than those tabulated.

Among those patients with marked nasal allergy

or asthma, treatment should be started with 0.10 cubic centimeter of 1:100,000. The optimum dose may vary from 0.10 cubic centimeter of 1:10,000 to 0.10 or 0.20 cubic centimeter of 1:1,000. In extremely severe cases it may be advisable to start treatment with the 1:1,000,000 dilution. In cases of less than average severity the 1:10,000 dilution may be used first. It is more advisable to determine the dosage on the basis of the degree of symptoms rather than on the degree of skin reactivity noted in the titration. In small children between two and six years of age, treatment should begin with the 1:10,000,000 dilution. In children from six to fifteen years of age the 1:1,000,000 dilution should be used first.

If in any instance there is an exacerbation of symptoms after any individual injection, the dosage should be reduced about ten times.

In some cases treatment may be necessary only during the fall and winter months; in others, it must be given perennially. Some patients do not require further treatment after one or two years. It is always advisable to institute prophylactic measures as already suggested.

We have noted among patients sensitive to house dust that in general the symptoms are definitely more severe during the fall and winter months. Those patients who still have marked symptoms during the spring and summer months may be sensitive to atmospheric molds. In these cases the extract should consist of half stock dust and half feed mill dust which contains all the important atmospheric molds such as Alternaria, Hormodendron, Helminthosporium, rusts, and smuts. Furthermore, we have noted that some patients have nasal symptoms and asthma only during the summer months as the result of mold sensitivity. These patients may or may not be sensitive also to pollens.

The following case reports illustrate the plan of treatment employed and the results obtained:

CASE REPORT I

Mrs. A. Z., fifty-two years of age, complained of nasal allergy with pharyngeal irritation. Sneezing, nasal obstruction, and discharge had been present for ten years. The examination of the nose showed a pale, boggy mucosa. The secretions contained a moderate number of eosinophils. The skin tests were all negative.

Stock dust therapy was administered as follows:

7-21-41	0.10 cc. 1:10,000 No. 18 Dust
7-30-41	0.15 cc. 1:10,000 No. 18 Dust
8- 6-41	Marked improvement
	0.20 cc. 1:10,000 No. 18 Dust
8-13-41	0.25 cc. 1:10,000 No. 18 Dust with molds 1:100,000
8-22-41	Relief practically complete
	0.30 cc. 1:10,000
8-29-41	0.35 cc.
9- 5-41	0.40 cc.
9-15-41	0.45 cc.
10-16-41	0.10 cc. 1:1,000
11-21-41	0.10 cc.
12- 3-41	0.15 cc.
12-19-41	0.20 cc.

This case illustrates the response to low dosage in spite of negative skin reactions.

CASE REPORT II

Mrs. J. M. O., fifty years of age, was first seen on July 19, 1939. The patient's chief complaints were sneezing, nasal obstruction and discharge, moderate cough and wheezing. Mild nasal symptoms had been present since childhood. Since June, 1934, the nasal symptoms had been very marked. Removal of nasal polyps and ionization were performed in August, 1934. A perforation of the cartilaginous septum followed the ionization. There was no relief of symptoms following these procedures. The examination of the nose showed a very pale, boggy mucosa with almost complete obstruction of both sides of the nose; polyposis, grade 3 right, grade 2 left; and perforation of the cartilaginous septum about 1 centimeter in diameter. The nasal secretions showed a marked eosinophilia. The skin tests were all negative.

Stock dust therapy was instituted as follows:

7-19-39	0.10 cc. 1:1,000 No. 14 Stock Dust
7-24-39	Definite relief after first injection
	0.20 cc. 1:1,000 No. 14
7-28-39	Very marked relief of symptoms. Nose definitely improved.
	0.10 cc. 1:1,000 No. 14 with molds 1:10,000
8- 2-39	0.20 cc. 1:1,000 No. 14 with molds 1:10,000
8- 7-39	0.30 cc. 1:1,000 No. 14 with molds 1:10,000
8-14-39	0.40 cc. 1:1,000 No. 14 with molds 1:10,000
8-23-39	Slight increase in symptoms
	0.20 cc. 1:1,000
9- 1-39	No nasal polyps.
	Nose open and free of symptoms.
	0.20 cc. 1:1,000
9-11-39	0.20 cc. 1:1,000
9-20-39	Slight return of symptoms
	0.10 cc. 1:1,000
9-20-39 to 12-18-41	Maintained on 0.10 cc. 1:1,000 solution

CASE REPORT III

Mrs. J. T. J., thirty years of age, was first seen on November 6, 1941. The patient was suffering from a very marked nasal allergy of three years duration. She stated she used 250 sheets of Kleenex a day. The nasal mucosa was moderately pale. The secretion was thin with moderate eosinophilia. The skin reactions were all negative.

Stock dust therapy was administered as follows:

11-14-41	0.10 cc. 1:10,000 No. 19 W
11-21-41	Marked improvement
	0.15 cc. 1:10,000
11-28-41	Practically complete relief.
	0.20 cc. 1:10,000
12- 5-41	0.25 cc. 1:10,000
12- 9-41	Slight return of symptoms
	0.10 cc. 1:100,000 No. 19 W
12-16-41	Free of symptoms
	0.15 cc. 1:100,000
12-23-41	0.20 cc. 1:100,000

CASE REPORT IV

R. M., twenty-four years of age, was first seen on August 16, 1941. The patient complained of nasal allergy and bronchial asthma. He had suffered from nasal allergy for ten years and with asthma since December, 1940. There was an

occupational dust contact. He weighed 140 pounds. The nasal mucosa was pale and boggy. There was moderate eosinophilia of the nasal and bronchial secretion. The skin reactions were positive to house and occupational dusts.

Stock dust therapy was administered as follows:

8-18-41	0.05 cc. 1:10,000 No. 18 (Weight 140)
	0.05 cc. 1:10,000 Occupational Dust
8-24-41	Worse after first injection
	0.10 cc. 1:100,000 No. 18-1:10,000 Occupational Dust
8-30-41	0.10 cc.
9- 5-41	0.15 cc.
9-13-41	0.20 cc.
9-19-41	0.25 cc.
9-27-41	Occasional mild attack (Weight 147)
	0.30 cc. 1:100,000 No. 18 W-1:10,000 Occupational Dust
10- 5-41	0.35 cc.
10-11-41	0.40 cc.
10-17-41	0.20 cc. Mild symptoms after last injection
10-24-41	0.25 cc.
10-31-41	0.30 cc.
11- 9-41	0.35 cc.
11-19-41	0.40 cc.
12- 1-41	0.45 cc.
12-14-41	0.50 cc. (Weight 151)

Patient has been asthma free to date.

CASE REPORT V

Miss O. L., nineteen years of age, was first seen on August 15, 1941. She complained of a severe nasal allergy of ten years' duration with the loss of the sense of smell. Examination revealed a pale, boggy mucosa with polyposis grade 1. The secretion showed a marked eosinophilia. There were many plus one skin reactions to foods and inhalants. No food manifestations. The skin reaction was positive to 1:100 stock dust.

Stock dust treatment was instituted as follows:

8-20-41	0.05 cc. 1:10,000 No. 18 Stock Dust
8-25-41	0.10 cc.
8-29-41	0.15 cc.
9- 5-41	0.20 cc.
9-12-41	0.25 cc.
9-23-41	0.30 cc.
9-29-41	0.35 cc.
10- 6-41	0.40 cc.
10-13-41	0.45 cc.
10-24-41	0.50 cc.
11- 3-41	0.10 cc. 1:1,000 No. 18
11-17-41	0.15 cc.
12-12-41	0.10 cc.

There was gradual improvement with complete relief and a distinct change in the nasal mucosa toward normal color. The nasal obstruction was relieved. The sense of smell returned for the first time since early childhood.

THE DIAGNOSIS AND TREATMENT OF HAY FEVER

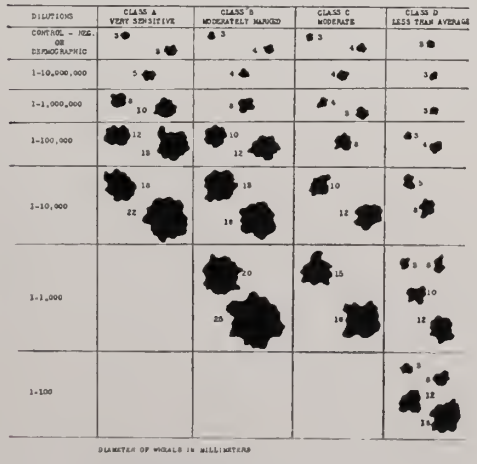
In the diagnosis and treatment of hay fever the following factors must be taken into consideration: The specific pollens which appear in the atmosphere in a given locality; the pollens to which the patient is sensitive; the degree of sensitivity; the establishment of an optimum effective dosage; and the consideration of nonpollen sensitivities and the existence of other manifestations of allergy.

Among the many varieties of trees, grasses and weeds, only a comparatively small number produce enough atmospheric pollen to be of significance. The evaluation of the plants which cause hay fever is based upon their relative abundance and distribution and upon the amount of pollen which appears in the air. Field surveys, therefore, must be correlated with atmospheric counts. The technic of making these counts is as follows: (1) a microscopic slide is coated with glycerine jelly and exposed for twenty-four hours; (2) Basic fuchsin may be added to the jelly to give it the color of red ink—two to three drops of saturated aqueous solution to one ounce. This stains the pollen grains a purplish red color and makes identification more easy, since mold spores and other materials do not take the stain; (3) The number of pollen grains appearing on an area of 1.8 square centimeters is considered the atmospheric count. This also represents the number of grains per cubic yard of air in twenty-four hours. In general, the atmospheric count must be twenty-five or over to cause symptoms.

In the state of Iowa the hay fever season begins with the pollination of the elm trees about the fiftennth of March (See Missouri[9]). About the first of April the cottonwoods and about a week later the oaks begin. Elm and cottonwood trees pollinate about three weeks, but the oaks may continue for five to six weeks because there are several species of these trees and they have different periods of pollination. Trees of secondary importance consist of maple, birch and sycamore.

The grass hay fever season is initiated by June and orchard grass and the docks about the fifteenth of May and lasts until about the tenth of June. A few days after this timothy and redtop begin to pollinate and continue until shortly after the fourth of July. English plantain pollinates throughout

CHART II



the spring and summer but is a factor in only certain areas when its growth is abundant.

About the end of July the pollens from the goosefoot family and hemp make their appearance and continue into the ragweed season. Russian thistle, burning bush (Kochia), and western water hemp and also marijuana (hemp) are particularly important in the western and southwestern parts of the state. According to Durham,[11] Kochia is particularly abundant in the south central, western, and southwestern areas. Lambs quarter and pigweed are widely distributed but are of secondary importance. The grasses which pollinate during this season are chiefly foxtail and tall, false redtop.

Giant and short ragweeds, and in the western part of the state burweed marsh elder, are the cause of the fall hay fever season which begins about the fifteenth of August.

In the diagnosis of hay fever, the skin tests to pollen extracts are very reliable. The occurrence of hay fever in the absence of positive skin reactions is very rare. On the other hand, false positive reactions may occasionally be noted in the absence of hay fever. In the final diagnosis, the skin reactions should be correlated with the time of the appearance of the symptoms, the atmospheric counts, and field surveys. The small group of tree, grass, and weed pollens enumerated above are sufficient for skin tests. A larger number is not necessary. For diagnostic purposes we routinely use the cut or scratch method.

For the purpose of determining the degree of skin sensitivity and for treatment, the pollen extracts should be made into individual or combined solutions of various dilutions from 1:100 to 1:10,000,000. The extracts may be used individually or combined according to which ones are a factor. For the grass hay fever which begins about May 15, June and orchard grass should be used in equal parts. Plantain or dock may be used individually or combined with the grasses. After June 15, timothy and redtop should be used for grass hay fever which occurs at this time. For the ragweeds and the goosefoots combined extracts of these two families may be used as individual or as combined mixtures according to whether the patient is sensitive to ragweeds or goosefoots or both. If necessary, grass extracts of those which pollinate at this time may be added.

With patients who do not receive satisfactory results from preseasonal, subcutaneous injection therapy after the season begins, the intracutaneous method may be used and the subcutaneous injections discontinued. Intracutaneous treatment may also be found to be most satisfactory with patients who have had incomplete preseasonal therapy. Whenever possible the coseasonal type of therapy should be preceded by a series of about ten injections either intracutaneously or subcutaneously before the onset of the season.

During the past six years we have employed the coseasonal method of treatment in practically all the tree and grass cases and in about one-half of the ragweed cases with satisfactory results.[10] Most of the patients had ragweed hay fever; many of these did not report for treatment until after the season had started. Some patients were treated by the intracutaneous method for six consecutive years.

Before the initial dosage is given, the skin sensitivity is determined by intracutaneous tests with 0.01 to 0.02 cubic centimeter of the various dilutions ranging from 1:10,000,000 to 1:1,000 (Chart II). Occasionally the 1:100,000,000 or the 1:100 dilutions are necessary. Initial testing is always made with the 1:10,000,000, 1:1,000,000 and the 1:100,000 dilutions using Coca's solution as a control. If a positive whealing reaction as large as 15 millimeters in diameter is noted to the 1:100,000 dilution, no further tests are made at the initial sitting. Within one or two days treatment should be started with 0.02 cubic centimeter of the 1:100,000 dilution, which usually produces a wheal about 15 to 18 millimeters in diameter. Subsequent doses should be administered every two to five days or longer, according to the degree of relief obtained. The amount of the injections should be increased by 0.01 cubic centimeter. The size of the wheal increases with each subsequent dosage by about 1 to 2 millimeters. The average size wheal which produces satisfactory relief varies from 18 to 22 millimeters in diameter. Occasionally it may be necessary to increase it to 25 or 30 millimeters in diameter. In order to reach optimum dosage, as much as 0.05 cubic centimeter of the 1:10,000 dilution may be necessary in cases of moderately pronounced sensitivity. After a few treatments at two to three day intervals it is often possible to increase the intervals from five to seven days in ragweed cases. In the tree and grass cases longer intervals are often possible because of the variations in pollen concentration. In some of the grass cases, intervals of two weeks or longer are possible. With each subsequent treatment there is a tendency to reduction of the skin reaction in proportion to the dosage injected. By this method of treatment the size of the skin reaction, the degree of relief, and the intervals between injections indicate the optimum dosage.

In the cases of moderately pronounced sensitivity a wheal about 15 millimeters in diameter is the rule with 0.01 cubic centimeter of the 1:10,000 solution. The 1:1,000 dilution should not be ap-

plied at the first sitting. Treatment should be continued with increasing doses of 0.02, 0.03, 0.04, and 0.05 cubic centimeter, and then with 0.01, 0.02, 0.03, 0.04, and 0.05 cubic centimeter of the 1:1,000 dilution according to the plan outlined above. Satisfactory response is usually noted by wheals varying from 18 to 22 millimeters in diameter.

In patients with moderate sensitivity a wheal about 15 millimeters in diameter is usually obtained with the 1:1,000 dilution. Subsequent injections should be increased by 0.01 cubic centimeter until the proper size wheal is obtained. With the 1:1,000 dilution the amount of the injection may be increased up to 0.05 or 0.07 cubic centimeter, and higher if necessary.

In the patients with less than average sensitivity, the 1:1,000 dilution may be used throughout in doses up to 0.10 cubic centimeter. It is rarely necessary to use the 1:100 dilution.

In giving subcutaneous injections by the preseasonal plan, small doses at five to seven day intervals have proved to be most satisfactory and free of complicating reactions. By this method an optimum dosage instead of a top dosage is desired. The original doses should start with 0.10 cubic centimeter of the 1:10,000,000 or 1:1,000,000 dilution according to the degree of skin reactivity, for Classes A and B, and increased by 0.05 cubic centimeter with each subsequent injection. Top doses should be about 0.10 to 0.30 cubic centimeter of 1:100,000 in very sensitive patients (Class A), 0.10 to 0.30 cubic centimeter of 1:10,000 in the less sensitive (Class B), and 0.10 to 0.30 cubic centimeter of 1:1,000 in the least sensitive (Classes C and D). It is necessary to continue these injections every two to five days during the season according to the symptoms and the atmospheric pollen concentration.

For the most satisfactory results in hay fever treatment, complete skin testing should be performed and particular attention must be directed to the control of complicating sensitivities or manifestations such as those resulting from dusts, molds and foods.

SUMMARY

1. The fundamental principles of diagnosis and treatment of the allergic diseases are based upon the analysis of a complete, detailed, clinical history, physical examination, skin tests, and whatever additional laboratory procedures may be indicated.

2. Although some one manifestation usually dominates the clinical picture, the existence of others should be recognized when present.

3. In nasal, sinus and bronchial cases, the following factors must be carefully evaluated: (1) The symptoms; (2) the gross pathologic changes; (3) the cytology of the secretions; (4) x-ray examination; (5) the bacteriologic findings; and (6) histopathologic findings. Acute, subacute, and chronic complicating infections should be considered.

4. The removal or avoidance of the etiologic factors is important in treatment. Prophylactic measures should be instituted routinely.

5. Injection therapy for dust, mold and pollen sensitivities is most satisfactory following the plan of establishing a small optimum dosage.

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ANALYSIS OF THE Rh FACTOR

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In recent months studies by Levine and his coworkers have revealed the extreme importance of the Rh factor in pregnancy and in blood transfusions. They have shown that the Rh factor in the fetus can act as an antigen, causing immunization in the pregnant woman. While many authors in the past have theorized on iso-immunization of the mother by the fetus, it remained for Levine to transform this theory into an important fact.

THE Rh FACTOR

To understand and to identify properly the Rh factor, it may be necessary to recall a few facts about hematology. There are four primary blood groups: A, B, AB, and O. A and B are agglutinogens (agglutinable substances) and are present chiefly in the red blood cells. Group A blood contains anti B iso-agglutinins in the serum. Group B blood has anti A iso-agglutinins in the serum. Group AB blood is characterized by the presence of both A and B agglutinogens in the erythrocytes and by the absence of iso-agglutinins

in the serum; it is the universal recipient. Group O blood has no agglutinogens in the cells and has both anti A and anti B agglutinins in the serum; it is the universal donor.

Rh is also an agglutinogen and may be present in the red blood cells of any of the four blood groups. The term "Rh" is used, because this agglutinogen is present in the Rhesus monkey. Approximately 86 per cent of the general human population possess the Rh factor (Rh agglutinogen) in their erythrocytes and are known as Rh positive, or Rh+. The other 14 per cent do not have the Rh factor in their erythrocytes and are known as Rh negative, or Rh—. The anti Rh iso-agglutinin is, of course, not present in the serum of an Rh+ individual, just as the iso-agglutinin A is not present in Group A blood. The anti Rh iso-agglutinin, however, is not normally present in Rh— blood. Anti Rh iso-agglutinins are produced in the serum of an Rh— individual if that Rh— individual receives a transfusion of Rh+ blood, or if an Rh— woman bears an Rh+ fetus. In each case the anti Rh agglutinins are produced by the process of immunization, the Rh agglutinogen being the antigen or immunizing stimulus. This process is better termed iso-immunization since both the source of the antigen and the individual being immunized belong to the same species.

TRANSFUSION OF Rh+ BLOOD INTO AN Rh— INDIVIDUAL

If a person who is Rh— receives a blood transfusion from a compatible Rh+ donor, there will be no reaction. The Rh factor, however, acts as an antigen and will stimulate the formation of anti Rh agglutinins in the recipient. If, after a suitable interval, the recipient should receive a second transfusion from the same donor or from another Rh+ donor of the same blood group, the recipient, now having anti Rh agglutinins in the serum, will hemolyze the Rh+ erythrocytes of the donor. The result will be a severe if not fatal blood transfusion reaction. It is felt that the majority of severe intra-group transfusion reactions are due to the Rh factor.

PRODUCTION OF ANTI Rh ISO-AGGLUTININS IN PREGNANCY

If an Rh— mother bears an Rh+ fetus, anti Rh iso-agglutinins may be produced in the mother and appear in her serum. In such cases, it is apparently necessary for the Rh+ fetal blood to penetrate the placenta and enter the maternal circulation. After the anti Rh agglutinins are produced in the mother, they may traverse the placenta, enter the fetal circulation, and cause hemolysis of the fetal blood. This fetal hemolysis results in liver damage, kidney injury, and anemia, and consequently in jaundice, edema, and erythroblastosis, respectively. (Figure I.) Chronic hemolysis of fetal blood will produce all the signs and symptoms present in that disease known as erythroblastosis fetalis. Levine and his coworkers have proved that the great majority of the cases of erythroblastosis fetalis are due to this iso-immunization of the mother by the fetus, the Rh factor in the infant being the antigen.

Often the infant with erythroblastosis fetalis dies in utero, and the mother delivers a stillborn fetus which may be macerated. Not infrequently erythroblastosis fetalis is the cause of repeated stillbirths and macerated infants. In many families the first infant is normal, and the remainder have erythroblastosis fetalis and may be born in a macerated condition. The first infant is often spared, because more than one pregnancy with an Rh+ fetus may be required to raise the mother's anti Rh titer sufficiently to affect the infant. This principle is true of other forms of immuni-

MODE OF PRODUCTION OF ERYTHROBLASTOSIS FETALIS

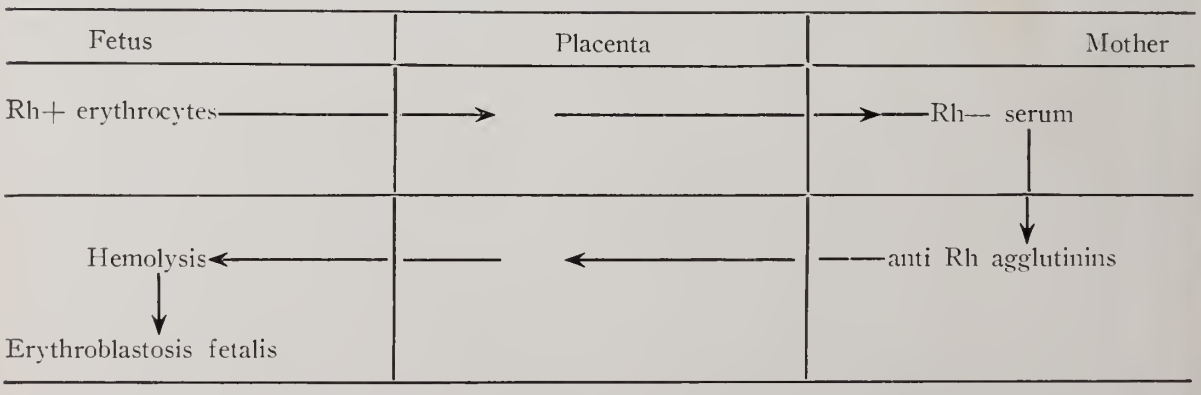


Fig. 1. This figure illustrates the mode of production of erythroblastosis fetalis. The Rh+ fetal red blood cells must penetrate the placenta and enter the maternal circulation. Anti Rh iso-agglutinins are then produced in the mother by the process of iso-immunization. These agglutinins must penetrate the placenta and enter the fetal circulation. The fetal Rh+ blood is consequently hemolyzed by the anti Rh agglutinins. Hemolysis of fetal blood causes the disease entity of erythroblastosis fetalis.

zation. It will be recalled, for example, that the first injection of tetanus toxoid does not raise the individual's tetanus antitoxin level appreciably; the second and third injections, however, will increase the titer to a marked degree. Some families have a history of an occasional infant with erythroblastosis fetalis interspersed between normal infants. In such cases, it is possible that the normal infants were Rh— and not capable of immunization, or if Rh+, that the erythrocytes could not pierce the placenta so as to immunize the mother.

The mother who has been immunized by the Rh+ fetus and consequently has produced anti Rh iso-agglutinins should not receive a transfusion with Rh+ blood. It was because Levine noted a high incidence of intra-group blood transfusion reactions in the parturient woman that he undertook the study of the Rh factor in pregnancy. Just how long the anti Rh agglutinins can remain in the mother's serum is not definitely known. In the first such case studied and reported by Levine and Stetson, there was a high maternal anti Rh titer which gradually decreased and finally disappeared after a year. The author has witnessed cases with Levine in which anti Rh agglutinins were not demonstrable when searched for in the mother's serum immediately after delivery of the erythroblastotic infant. They apparently can disappear promptly from the mother's serum. Nevertheless, while not demonstrable in the serum, they still may have the power of causing an intra-group transfusion reaction. In such cases it is assumed that anti Rh agglutinins are present in the reticulo-endothelial system.

It is to be emphasized that iso-immunization of the mother by the Rh factor in the fetus can only occur if the fetus is Rh+ and the mother Rh—. It is also necessary for the husband to be Rh+. The Rh factor is inherited as a simple mendelian dominant.

PRACTICAL APPLICATIONS

Anti Rh agglutinins are known as warm agglutinins because they often react better at 37 degrees centigrade than at lower temperatures. They thus differ from the agglutinins of the grouping sera. In cross-matching, Levine therefore has recommended that the patient's serum and donor's cell suspension be incubated at 37 degrees centigrade for thirty minutes and then centrifuged at low speed for one minute.

A commercial source of anti Rh agglutinins is not yet generally available to permit the selection of Rh— donors. In New York City, however, one can obtain a professional Rh— donor of any blood group.

A mother who has recently delivered an infant with erythroblastosis fetalis or a stillbirth who might have died due to erythroblastosis fetalis should be transfused only with Rh— blood or with plasma. If these are not available, the cross-matching, as previously described, should be performed. Even then, the anti Rh agglutinins occasionally are not demonstrable in the serum but are present in the body and capable of causing a severe transfusion reaction. In these cases the blood must be given very slowly and discontinued at the first sign of a reaction.

An infant born alive and afflicted with erythroblastosis fetalis may be saved if transfused promptly after birth. Rh— blood is preferable and may be the only type of blood which will not aggravate the infant's condition.

DIABETES MELLITUS COMPLICATED BY URINARY TRACT INFECTIONS*

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The clinical observation of a close association between diabetes mellitus and kidney disease has stimulated considerable investigation. The well-established, generalized, vascular effects of this disease, especially when not controlled, have been considered as related phenomena. Upon the basis of this experience many investigators have raised the question of a nephrosclerotic change, so constant in their opinion that a syndrome was described in several papers.[1 to 8] There was general agreement that this was a mild diabetes with nephrosis, hypertension, and hypoproteinemia. There was some disagreement in describing the microscopic, pathologic changes which essentially were hyaline degeneration in the vessels of the glomeruli or between the vessels. So consistent was this, in fact, that Allen[6] believed the kidney morphology could be used to give histologic proof of diabetes in a person over forty years of age.

Despite the generalized attention given to this problem, the question of urinary tract infections *per se* has undergone relatively little scrutiny. Only recently has the full significance of this complicating infection been realized. Tollman and Kirk,[9] reporting on 277 patients with diabetes mellitus with pathologic reports on 36 deaths, noted acute inflammatory changes in ten. Seven of these had hyperglycemia, were hard to control, and all had abscesses with cloudy swelling and fatty degeneration. More recently Harrison and Bailey[10] noted the fact that 20 per cent of diabetic patients going to autopsy have urinary tract in-

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fections as compared with only 4 per cent among the non-diabetic patients. This is not the same as noted in life, they stated. They studied 50 patients with diabetes mellitus and found 10 had pyuria and 27 had bacilluria, whereas in 50 non-diabetic patients there were two with pyuria and four with bacilluria. In support of these findings, Bowen and Kutzman[11] reported in September, 1942, that in 84 unselected diabetic patients they found only seven with completely normal urinary tracts, 51 had upper and 26 lower urinary tract involvements. Frequently there were no symptoms associated with these infections despite clear-cut findings such as leukocytes and bacteria in the renal pelves seen in 34 patients. They remarked that an extreme reduction of kidney function was noted in only three instances.

It is of especial interest that many of these analyses were with female patients. The obvious difficulty in diagnosing urinary tract diseases in women is the lack of real value in tests done on voided specimens coupled with the potential danger in catheterization. In addition, the failure of symptoms to guide the physician has been a constant handicap.

The present case report is significant in light of these summaries of recent growing interest in such an important problem. It represents many of the hazards attendant upon kidney infections in the presence of diabetes and the subsequent abnormal course of the diabetes itself. The relationship of the liver metabolism to these other processes is also well illustrated.

CASE REPORT

Miss M. L., 24 years of age, was first admitted to Iowa Methodist Hospital on December 16, 1936. She had been known to have diabetes for seven years, had been hospitalized elsewhere five times for regulation of insulin dosage, and once had been in coma. On admission the patient was in pre-coma, but had a blood sugar content of 416 milligrams per 100 cubic centimeters, had glycosuria, acetonuria, a trace of albuminuria with no pus or red cells in the urine. Her leukocyte count was 14,600. The usual treatment for the pre-coma stage of diabetes was given and response followed with no abnormality. Urinary tests were never completely sugar-free and there were occasional pus cells in voided specimens. She was discharged on December 30, 1936, using regular insulin* in dosages of 27 units in the morning, five units at noon, and 12 in the evening. Her diet consisted of 150 grams of carbohydrates, 65 of fats, and 80 of proteins.

*Because of greater purity, and freedom from irregularity of "bootleg" insulin, we now use crystalline in place of "regular" insulin.

Her next admission was as Mrs. M. M., on May 10, 1937, when the patient was suffering from similar complaints. These were nausea and vomiting, but in addition there was pain over the right kidney area. There were no abnormal physical findings as before and, although treated for diabetic coma, there was a poor response. Tests showed glycosuria and acetonuria persistently despite all therapy. An intravenous pyelogram and a retrograde pyelogram revealed that there was an obstructed right kidney with a normal left kidney. On May 16 a right nephrectomy was performed and the kidney was seen to have multiple abscesses scattered throughout. On June 10 the patient was discharged, having responded much better to the treatment of her diabetes but still showing occasional glycosuria. Ambulatory treatment was then 50 units of crystalline insulin in the morning and 14 units at night.

On September 20 of that year she again entered the hospital with a complaint of nausea and vomiting of one week's duration. She was regulated with relative promptness this time and on October 10 was discharged. Her regime at that time included 40 units of crystalline insulin in the morning and 14 in the evening. There was occasional pyuria with only a small number of cells.

She was well maintained then until August 8, 1942, when she was again admitted to the hospital as Mrs. M. S. A diagnosis of vomiting of pregnancy had been made when she was hospitalized elsewhere two weeks previously. Vomiting persisted for five weeks; this occurred within an hour after eating either solid or liquid food. There was no pain associated with the vomiting. Physical examination revealed no abnormalities, and her difficulty was believed due to an extra-diabetic disturbance. There was a leukocytosis (20,000) and moderate anemia—hemoglobin 11.2 grams per 100 cubic centimeters and 3,330,000 red blood cells per cubic millimeter. Also, there were a glycosuria, pyuria, slight hematuria, and four plus acetonuria. The level of the blood urea nitrogen was normal, cholesterol was normal, blood lipids and amylase were normal, and the gastric acidity was normal. Examination of the stools revealed no abnormality. All x-ray examination was negative. The chest was free of pathologic signs, the kidney, ureter, and bladder showed only some calcification near the pelvis of the left kidney (external to the kidney shadow), both stomach and colon configurations were normal, and the left kidney function was good according to intravenous pyelogram pictures and a retrograde pyelogram. The gallbladder was well filled by dye and had a normal emptying time with no shadow of stones seen.

Vigorous treatment of the diabetes was carried out, despite which she responded very poorly. She varied quickly between a pre-coma stage and insulin shock, and a consistent dosage of insulin could not be determined. A Miller-Abbott tube offered no relief, urine tests were taken every two hours, and insulin was given according to the amount of glycosuria. It was decided that an exploratory laparotomy was necessary.

On August 25 this was done. The only abnormalities noted were some enlarged mesenteric glands and an enlarged liver which appeared normal grossly; biopsies of both were taken and the appendix removed. The pathologic examination gave the surgeon the impression of a fatty liver. Later examination by the pathologist* revealed, however, that the liver showed no unusually high fatty content and appeared normal with high glycogen content probably present. Lipocaic was used at this time with no clear-cut effect. The patient improved after this, although not controlled with full satisfaction and was discharged on September 20 about one month after admission.

Four days later, on September 24, she was again in the hospital suffering from weakness, nausea and vomiting, and mental depression. She had a temperature of 102 degrees, a pulse rate of 108, and a leukocytosis of 24,000 per cubic millimeter; there were glycosuria, acetonuria, slight albuminuria, and some pus cells in the urine. She was treated for her diabetes as before, but continued to show glycosuria, acetonuria, a few red cells, and some white cells in the urine. Her course was essentially as on the previous admission, her symptoms persisted, and in addition there was pain over the left kidney area. Sulfadiazine was given for one week, six grams a day, at the end of which time a pyuria still existed. After one week this course was repeated with similar results. She was sent home on November 6 in the ambulance, relieved of most of her symptoms but still with the urinary findings as noted.

Her last admission was on December 15 with a recurrence of previous symptoms and fever. There was one gram of albumin per 1,000 cubic centimeters of urine with pyuria now marked. Sodium sulfathiazole was given by mouth, but this produced so much nausea that after four days it was replaced by syrup of mandelic acid (Abbott), two drams post cibum—this latter was only slightly better tolerated. Pyuria continued, but the diabetes itself was fairly well controlled.

On January 3, 1943, the patient began having difficulty in voiding and became somewhat irrational. She had Kussmaul breathing, had a rapid pulse rate, and showed only 0.25 per cent of sugar in the urine although tests revealed acetonuria, pyuria, and hematuria. On the following day the urine was still milky in appearance and showed no sugar although signs of diabetic coma were present. A blood sugar at this time showed 500 milligrams per 100 cubic centimeters and the carbon dioxide combining power was 12.6 volumes per cent. She was treated for diabetic coma as before with some relief noted. The urea nitrogen in the blood was then 26.6 milligrams per 100 cubic centimeters.

On January 4 only 21.5 cubic centimeters of urine were excreted and 2,000 cubic centimeters of fluids were taken by venoclysis; on January 5 there were 35 cubic centimeters excreted with the same intake, and she was free of coma symptoms and had no edema. In the next forty-eight hours no urine was obtained and the urea nitrogen level in the blood was 63.4 milligrams per 100 cubic centimeters, rising to 66.4 on the eighth day. On that day the patient voided 525 cubic centimeters and another 325 cubic centimeters was obtained later in the day. Administration of fluids subcutaneously was done most of the time and there appeared to be some improvement. During this whole period her mean blood pressure was 90/70, the pulse was weak and rapid, and the temperature was normal. The urine was free of sugar.

The patient became more deeply comatose and after some tonic, generalized contractions she responded to no stimuli. Her blood sugar on January 8 was 204 milligrams per 100 cubic centimeters, but she was clearly suffering from a profound uremia and expired on January 9 at 1:30 a. m.

POSTMORTEM ABSTRACT

A section through the left uretero-pelvic junction showed an obstructing ulcer which extended through the muscularis. On the surface of the ulcer there was seen a rich growth of Monilia organisms.

The left kidney pelvis showed a severe subacute inflammatory reaction, and at several points Monilia were found. Many of the renal tubules contained pus. The parenchyma of the kidney showed widespread subacute inflammation. Cultures from the pelvis yielded Escherichia coli and Staphylococcus aureus; no Monilia were recovered.

In the pancreas, which weighed only 30 grams, were seen very few Islands of Langerhans, and these were small in size.

The liver weighed 2,425 grams, had a smooth surface, and was dark reddish-brown in color. The cells were large, possessing coarsely granular

*For the pathologic reports we are deeply indebted to Richard F. Birge, M.D., Iowa Methodist Hospital, including confirmation of his findings on the liver by a pathologist at another laboratory.

cytoplasm. Changes suggestive of hydropic or fatty alteration were not present. A few of the liver cells obtained at biopsy on August 25, 1942, contained large vacuoles. Unless lipoids were present in a finely dispersed form in both biopsy and autopsy specimens, it was unlikely that the hepatomegalia was due to excessive accumulation or storage of fats. It was Dr. Birge's opinion that this was a liver in which glycogen had been stored in abundance.

DISCUSSION

This patient illustrated amply the rôle which a urinary tract infection may play in the course of diabetes mellitus. During the entire time of her infective processes in the kidneys she showed a high grade resistance to the usually effective doses of insulin. During part of that time there was no indication of renal involvement other than the occasional pus cells in the urine which were considered no more significant than in any other female. Catheterized specimens which were taken occasionally, it is true, often showed clear urine; although once these showed pus cells, it was considered ample reason for a more extensive examination of the urinary tracts. The relative danger of catheterization as opposed to an undiscovered pyelitis should be readily apparent from the course of this illness.

The occurrence of hyperglycemia in the absence of glycosuria ordinarily may be of no importance. This implies a normal kidney function, however, and it is assumed that a proper excretory action must be assured before such a phenomenon is not considered an indication for the use of insulin. In this patient a state of coma existed when the kidneys were unable to excrete any sugar, and it was necessary to ignore the urinary findings in order to treat the diabetes. Clinically the observation of a high blood sugar content, in the absence of any symptoms, with the urine free of sugar and acetone, does not indicate the need for any insulin.

The part that the liver played in the disease processes is of great and immediate interest. The occurrence of hepatomegalia with diabetes mellitus, especially in juvenile patients, is not unusual. These may, by distension of the organ and consequent stretching of Glisson's capsule, be one of the causes of persistent nausea and vomiting such as seen in the present patient. It is a question which has attracted considerable attention.

Hanssen[12] found in a review of 74 patients with diabetes mellitus, who were under 20 years of age, that the livers in 12 were enlarged. Of 231 patients over that age there was one liver enlarged. They were all soft livers, and the patients all had severe diabetes which was hard to control. All liver symptoms disappeared with final correct management of the diabetes.

Marble and co-workers[13] found 60 cases among 1,077 patients and believed that it was due to fatty infiltration of the liver with some hydropic degeneration. The cause was similarly ascribed to fatty change by Connor.[14] Warren[15] believed that fat might be up to 40 per cent, but often there was excessive glycogen deposit, fluid, amyloid, tumor, and circulation changes which played a part; he emphasized particularly excessive fluid content.

It has been Wilder's experience[16] that all of these enlarged livers respond to adequate control of the diabetes, with freedom from symptoms and return to normal size. This has not been the case with patients seen by other men. To control hepatomegalia, which he believes is often otherwise not amenable to the therapy, Dragstedt[17] has used a substance obtained from pancreas, which is considered a fat-metabolizing hormone. This is called lipocaic and has had several clinical trials, as well as the animal experiments done by Dragstedt. Grayzel and Radwin[18] reported favorably with recoveries in three otherwise uncontrollable patients with hepatomegalia and diabetes mellitus. Another patient was shown to have fatty infiltration of the liver in a biopsy specimen as well as diminished liver function and glucose tolerance with return to normal after lipocaic had been used.[19]

In this case the surgeon's impression and that of another pathologist at the time of the liver biopsy led to the use of lipocaic as a therapeutic aid. This was considered prudent in view of the foregoing and other reports. It altered very slightly the course of her illness. The biopsy was taken at a time when the diabetes was controlled, but nausea and vomiting, with hepatomegalia, persisted. The postmortem specimen following this therapy in a patient who had had her diabetic disturbances *per se* fairly well controlled, but who was uremic was not fundamentally different.

If we were to believe that the enlarged liver depended on deposits of fat, we should have expected that some change would have followed lipocaic adminstration, assuming that the substance is as efficacious as indicated by the experience of others. Since no such lipoid changes could be demonstrated at any time we could not consider this a test of the lipocaic. It merely cast some doubt on the contention that such enlarged livers should be considered fatty.

The possibility that this hepatomegalia represented glycogen stored in large amounts is not illogical. It is abundantly clear that the patient

showed some abnormal response to therapy aimed to control her diabetes mellitus. Although she had a fairly low blood sugar content when she expired, her previous levels had been high and fluctuated very quickly. Certainly such a background would conduce to abnormal glycogenolysis. For her, insulin lacked its normal potency in the more formidable presence of a persistent infection.

CONCLUSIONS

It is so notorious a fact as to be platitudinous that diabetes mellitus is difficultly controlled in the presence of an infection, but its familiarity robs it of none of its inherent truth. What is not commonly realized is that this infection is often not discovered, and the patient is called merely a "severe diabetic." No doubt many of these possess infections of the urinary tract, especially the women.

This may be stated without qualifications: Any patient who has diabetes mellitus which is controlled with unusual difficulty and who has some pus cells in the urine, must be thoroughly examined for urinary tract pathology. Furthermore, even in the absence of pus cells, the index of suspicion should be raised. In all likelihood many women can be spared long periods of illness and even premature death by the discovery of such hidden infection and its subsequent intensive treatment. The dangers of catheterization, which may have been exaggerated, cannot be considered sufficient cause for hesitation, and very often cystoscopic examination as well as intravenous pyelography may have to be employed to derive the desired results. Unfortunately, the directing light of localizing symptoms is more often absent than present. We must turn, rather, to the laboratory and to specialized procedures.

SUMMARY

1. A review of recent literature revealed that although the relationship between diabetes mellitus and urinary tract pathology has long been known, more pertinent studies of urinary tract infections have been neglected.

2. A case record of a patient who suffered from diabetes mellitus and kidney infections was presented, with complete findings of physical examination, laboratory studies, laparotomy, cystoscopy, and autopsy.

3. The rôle of hepatomegalia was suggested as a cause for abdominal pain in this patient, by tension of the liver capsule. The etiology of the enlarged liver in relation to fat and sugar deposits was discussed with a conclusion that pathologic study could not demonstrate fatty degeneration.

4. Stress was laid on the importance of examining the urinary tract carefully in patients with diabetes mellitus, especially when any abnormality occurs.

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TORSION OF APPENDICES EPIPLOICAE

Report of a Case

S. Dale Porter, M.D., Grinnell

Of all abdominal conditions which may arise, torsion or acute inflammation of an appendices epiploicae is one of the most rare. This is attested by the fact that to date very few cases have been diagnosed preoperatively. There have been only sixty cases reported in medical literature.

According to Moore,[1] during the year 1703 Lettre discovered a pea-sized foreign body in the abdominal cavity which was thought to be the remains of an appendices epiploicae; Creweilhier (1849) and Deville (1851) also described foreign bodies in the abdominal cavity which were thought to be of similar origin.

Moore's review further stated that Robinson's thesis published in 1908 on the anatomy and pathology of the "sero-appendices" is the most painstaking study of the subject yet to appear. He stated the dog, cat, rabbit, and rat have no sero-appendices but that the anthropoid ape has sero-appendices similar to those found in man. Robinson's detailed description of the anatomy, physiology, and pathology of the appendices epiploicae is generally accepted.

Anatomically, appendices epiploicae are pedunculated tabs of fat attached to the colon, covered only with peritoneum, which vary greatly in size, shape, and number. They extend from the cecum to the rectum, usually in two rows, one in relation to the anterior intestinal tenia and the other to the posterior intestinal tenia. The largest appendices epiploicae are found usually on the sigmoid. They are true hernias of visceral peritoneum filled with fat.

The true physiology of the appendices epiploicae has never been definitely established; however, Robinson suggested that they aid in the movement of fluids in the colon. Pathologically, the appendices epiploicae may undergo calcification, intra-abdominal torsion, intrahernial torsion with strangulation, intrahernial incarceration, and adhesions resulting in intestinal obstruction.

Torsion with acute inflammation is the most frequent pathologic process of the appendices epiploicae. Chronic and acute types of torsion are found at operation, the acute type being more common since it, of course, presents symptoms demanding immediate surgical intervention.

The cause of torsion of the appendices epiploicae is still a matter of conjecture, except that Moresten suggests an abnormally large appendix may have an abnormally long pedicle. It is undoubtedly true that many cases occur without diagnosis or treatment. I should like to report the following case:

CASE REPORT

History: P. E., an obese male thirty-eight years of age, was stricken with an acute left-sided pain on June 10, 1942. The patient weighed 245 pounds, having gained fifty pounds during the two years prior to this time. He described it as a "catch" in the side. He had no nausea, no vomiting, no diarrhea or urinary distress. For one week before the attack he had frequent desire to defecate, but had small stools that were well formed with no evidence of blood. He had had no previous illness except a fracture of the left elbow. Twelve hours after the attack he entered the hospital.

Physical Examination: The patient's throat was reddened, the tonsils were marked by atrophy, the nose appeared normal, and the thyroid gland was not palpable. The teeth were in fair condition. Moist râles were heard over both bases of the lungs, but there was no consolidation. There was no enlargement of the heart, the heart rate was regular, and the blood pressure was 126/80. The abdomen was mildly distended, and there was tenderness over the entire area, with some rigidity in left lower quadrant; there were no masses palpable. The reflexes were normal. Upon rectal examination tenderness was noted in the left quadrant, but no masses were evident. The urinalysis was negative. The white blood count was 10,500, the red blood count was 4,500,000, and the hemoglobin was 85 per cent Sahli.

The patient was given codeine sulfate, grain 0.5, hypodermically for pain, ice packs were applied and conservative treatment advised. The most probable diagnosis was thought to be diverticulitis. He was treated conservatively for forty-eight hours, when the pain became more severe, localized rigidity was evident, and a palpable mass was felt on the left side midway between the umbilicus and the iliac crest. The patient's temperature was 100.6 degrees, the pulse was 90, and the respirations 22 per minute. The white blood count was 14,300; the urine was normal. The patient was anxious for relief and surgery was advised. He was given a spinal anesthetic of pontocaine, 18 milligrams.

The patient's abdomen was opened with a left gridiron incision. A large purplish mass of fat was lying in apposition to the peritoneum, which was also markedly discolored. The mass of fat was adherent to the descending colon and was twisted on the pedicle with two complete turns. The mass was removed and the abdomen explored and closed without drainage. The patient's recovery was uneventful.

The laboratory diagnosis made by the Department of Pathology at the State University of Iowa was, "Adipose tissue showing hemorrhage and acute inflammation."

SUMMARY

1. Review of some of the literature concerning torsion of appendices epiploicae shows this to be a rare surgical entity.

2. Report of an additional case with recovery.

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THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

BRONCHOGENIC CARCINOMA

F. P. McNamara, M.D., Dubuque

The diagnosis of bronchogenic carcinoma, usually termed lung cancer, is being made with a steadily increasing incidence and by some it is believed to be only second to carcinoma of the stomach. Until ten years ago the disease was considered hopeless; however, since Graham and Singer[1] reported the first successful pneumonectomy for carcinoma of the lung in 1933, the number of cures has gradually increased and today the prognosis is relatively favorable if the lesion is detected in time. Since this form of cancer seems to be increasing in frequency, it is therefore essential that every doctor be on the alert to detect it in its incipient stages when the chance of cure is good, rather than late when the condition is hopeless.

INCIDENCE

Our interest in this type of cancer was renewed because in 22 autopsies since the beginning of 1943 there have been three cases of bronchogenic carcinoma, two of which were entirely unsuspected. One occurred in a man seventy-four years of age who died of coronary thrombosis; another was found in a man sixty-nine years of age who committed suicide; the third was in a woman fifty-seven years of age in whom a diagnosis of rib metastases, probably from a lung carcinoma, had been made after months of clinical study. These three cases indicate the latency of this form of carcinoma. Gewanter and his associates[2] have recently published a report of 25 cases of latent primary carcinomas occurring in 2,514 autopsies of which 391 were cancer cases. Seven of the 25 cases (28 per cent) had their origin in the lung.

In our entire series of 897 autopsies there were 178 cases of malignant disease, and of these 12 were definitely proved to be bronchogenic in origin. In addition there were two other cases (one carcinoma of the pleura and one a small spindle cell tumor of the mediastinum) which were probably of bronchogenic origin, although this could not be demonstrated. Thus, in our series the incidence of this neoplasm was at least 6.79 per cent of all malignant tumors.

Rosahn[3] in a series of 435 cases of carcinoma found 43 (9.9 per cent) lung cancers at autopsy. Ochsner and DeBakey[4] stated that in 1912 Adler was able to collect only 374 cases of carcinoma of the lung and that the consensus at that time was that it was one of the rarest forms of the disease. They also pointed out that while this opinion may have been justified at that time, today almost the direct opposite is true. They cited the statistics of Brines and Kenning who found that carcinoma of the lung ranked fourth among 936 patients in their tumor clinic. Koletsky in 7,685 cases considered post mortem found that cancer of the lung ranked second to that of the stomach. Weller found only one case of lung cancer in the first 1,000 autopsies at the University of Michigan Hospitals; whereas, in the second thousand there were five, and for the first 450 cases in the third thousand the incidence indicates eight per thousand. Rosahn also cited figures for a series of 4,156 autopsies at Yale Medical School between September 22, 1917, and December 31, 1937. The incidence of all forms of carcinoma rose from 13.97 per cent in the period from 1918 to 1927 to 14.46 per cent in the period 1928 to 1937. During these respective periods the ratios of pulmonary carcinomas rose from 7.4 to 11.0 per cent. Ochsner and DeBakey cited their own figures which indicated a five-fold increase of pulmonary carcinoma in the autopsies at Charity Hospital in New Orleans. Many others have reported similar increases in the incidence of this disease and the consensus is that the increase has been both absolute and relative, although some authors, notably Macklin[5] and Peery,[6] believe it is due to other factors, especially better diagnosis and to the aging of the population. Whatever the outcome of this discussion, it is a generally recognized fact that approximately 15,000 persons die of the disease annually in the United States, which indicates the numerical importance of the problem. As Overholt and Rumel[7] have pointed out, because of its frequency, if for no other reason, it should be of great interest to the medical profession as a whole.

ETIOLOGY

The rise in the incidence of the bronchogenic lung has been concomitant with the development of the machine age, with the universal use of the gasoline engine, the urbanization of a great proportion of our population, and the prolongation of life through the effective control of many diseases. Therefore, it is evident that more people are exposed to more types of bronchial irritants over longer periods of time than ever before. Because of these facts it is not altogether surprising that bronchogenic carcinoma has increased so notably. In studies on the pathology of influenza, Winternitz, Wason, and the author[8] were impressed with the metaplasia of the bronchial mucosa in patients dying of influenzal pneumonia. Histologically, the

picture was essentially that of carcinoma and, therefore, it was considered probable that the incidence of bronchial carcinoma would increase following the pandemic of influenzal pneumonia in 1918 and 1919 or as a result of the inhalation of war gases, which was known to produce the same picture. While this theory has been generally discounted, the fact that the bronchial mucosa regenerates with the proliferation of carcinomatous-like masses of cells following a single acute irritation is exceedingly important. Cannot repeated irritations, by stimulating more and more regeneration, ultimately give rise to carcinoma of the bronchi? In other words, may it not be possible that the bronchial mucosa is especially susceptible to the very irritants, exposure to which has increased so greatly since the beginning of the century?

Most of the lung infections have been recognized as possible precipitating factors in the development of bronchial carcinoma. Syphilis and tuberculosis have also been considered etiologic factors, but the evidence is not convincing. Inhaled dusts might seem important but Vorwald and Karr[9] in their review concluded that only dusts containing carcinogenic substances such as radium and tar could be considered etiologic factors in the development of primary pulmonary carcinoma.

Inhalation of radioactive substances is responsible for the development of pulmonary carcinoma, and—according to Ochsner—Ristoski, Saupe and Schmorl found that 62 per cent of the workers in the Schneeburg mines (Saxony) died of the disease. The dust of these mines contains a combination of arsenic and radium emanation.

Ochsner and DeBakey are convinced that the increased incidence of pulmonary carcinoma is due largely to the increase of smoking, particularly cigaret smoking, which is universally associated with inhalation. All of their patients with the exception of two women were heavy smokers. They published an interesting graph showing the parallel between tobacco production and the incidence of lung cancer per 100,000 population in this country.

From the foregoing cursory review it is evident that many theories are held regarding the etiologic factors concerned in the development of bronchial carcinoma. Undoubtedly in most cases there is a combination of factors, including that of heredity.

SYMPTOMS

Unfortunately there is no symptom complex peculiar to bronchogenic carcinoma. Ninety per cent of the cases will be encountered between the ages of thirty and seventy and men are affected four to five times as frequently as women. The onset is insidious but the most common symptom is cough, a dry, nonproductive cough usually attributed to smoking or some other bronchial irritant. As the tumor enlarges it obstructs the bronchus and a mucoid sputum is coughed up. Later, since infection is likely, the sputum becomes purulent, and since the tumor may form an ulcer it may be streaked with blood, or a massive hemorrhage may result.

When the tumor occludes a bronchus, atelectasis of the involved lung occurs and the patient complains of shortness of breath or cyanosis. From the size of the tumor or, more often, from infection of the lung, there may be all the signs of pneumonia: chills, fever, and an area of dullness in the lung. At times after such an episode the patient coughs up a great deal of sputum with temporary alleviation of symptoms. Pain or discomfort is a rather common symptom but usually occurs when the pleura is involved or the growth has extended to the chest wall. Pleural effusion may occur but is not encountered early. Some patients complain only of hoarseness, malaise, loss of weight and strength, or of vague abdominal symptoms. Sometimes they simply state that they do not feel well, and occasionally hypertrophic pulmonary osteo-arthropathy is a sign which may indicate the diagnosis. It is evident, therefore, that it is well to keep bronchogenic carcinoma in mind when examining a patient over forty years of age with symptoms referable to the chest, especially cough, hemoptysis, or thoracic discomfort.

DIAGNOSIS

The first requisite in diagnosis is that the condition be kept in mind. When suspected, it is essential to have an x-ray examination with contrast studies as well as bronchoscopic studies. Ochsner and DeBakey state that bronchoscopic examination will usually give a correct diagnosis in 70 per cent of the cases. Certainly with adequate and repeated x-ray and bronchoscopic examinations, the high percentage of errors in the diagnosis of bronchogenic carcinoma, which has been shown to be 50 per cent in the past, will disappear.

TREATMENT

The only curative treatment of bronchogenic carcinoma is pneumonectomy with removal of the regional lymph nodes. Obviously to cure, the lesion must be confined to the lung and therefore must be diagnosed early. Lobectomy has resulted in cure in an occasional case but there is no method by which the operator can be certain that a given lesion is confined to a single lobe. Therefore, pneumonectomy is the preferred procedure. As

an indication of its value, Overholt and Rumel have reported that eight of seventeen patients (47 per cent) survived and apparently were well after variable periods of time. Oschner has had similar results and they are constantly improving as the technic of chest surgery improves. Radium or x-ray therapy are usually reserved for palliative treatment in bronchogenic carcinoma. The great hope of the patient is that his lesion shall be diagnosed early and that then he shall have pneumonectomy by an adequately trained thoracic surgeon.

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ANNUAL MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY

The Illinois State Medical Society will hold its 1943 annual meeting at the Palmer House, Chicago, on May 18, 19, and 20. The meeting will begin at 9:00 a. m., Tuesday, May 18.

This is featured as a war meeting and there will be many men in uniform present throughout the session. Physicians from adjoining states will be permitted to register, receive a guest badge, and attend any of the sessions as they may desire.

An invitation, therefore, is extended to the members of the Iowa State Medical Society to come to Chicago and enjoy these interesting sessions. Individual section meetings will be held on Tuesday and Wednesday afternoons, while the morning sessions will be joint meetings with all scientific sections participating. The Oration in Surgery will be presented by Willis D. Gatch, M.D., Dean and Professor of Surgery, Indiana University School of Medicine, at 11:00 a. m., Wednesday, May 19, and the Oration in Medicine at 9:00 a. m., Tuesday, May 18, by James E. Paullin, President-Elect of the American Medical Association, Atlanta.

All visiting physicians from adjoining states will be heartily welcomed at this meeting.

ANNUAL MEETING OF THE IOWA AND ILLINOIS CENTRAL DISTRICT MEDICAL ASSOCIATION

The annual meeting of the Iowa and Illinois Central District Medical Association will be held Thursday, May 27, at the Watch Tower Inn, Blackhawk State Park, Rock Island, Illinois.

At 4:00 p. m. Major Lindon Seed, M.C., chief surgeon at Camp Grant, Illinois, and formerly associate professor of surgery at the University of Illinois College of Medicine, will speak on The Use of Intravenous Fluids and Blood.

Italo F. Volini, M.D., professor of medicine at Loyola University School of Medicine, will appear on the program at 5:00 p. m. and will discuss Clinical Observations on Heart Disease.

Dinner will be served at 6:00 p. m. and will be followed by a social hour. Since this is the annual meeting of the society, there will also be an election of officers following the dinner.

At 8:00 p. m. Charles F. McKhann, professor of pediatrics and communicable diseases at the University of Michigan Medical School will speak on Progress in the Control of Communicable Disease. His talk will be illustrated with colored motion pictures.

SEVENTEENTH IOWA CONFERENCE ON CHILD DEVELOPMENT AND PARENT EDUCATION

In line with the national effort to reduce civilian travel, the Seventeenth Iowa Conference on Child Development and Parent Education will be conducted by radio on June 15. Radio Stations WSUI and WOI will carry the program.

The theme of this year's conference will be "Today's Children Tomorrow." The problem of guiding children who are growing up in a world at war will be discussed by Dr. Robert R. Sears, Director of the Iowa Child Welfare Research Station, at 10:00 a. m., under the title, "Shall We Neglect Our Children?"

At 2:00 p. m. Dr. William F. Ogburn of the Department of Sociology, University of Chicago, will carry this thought on to a consideration of postwar planning for "The Child in the Future." In order that the public may participate in the conference, groups will be organized under capable leaders in various parts of the state to discuss this topic at the close of the afternoon broadcast.

The conference, which is held annually, is sponsored by the Iowa State Council for Child Study and Parent Education, with the cooperation of the Iowa Child Welfare Research Station and the extension divisions of the University of Iowa, Iowa State College, and Iowa State Teachers College.

STATE DEPARTMENT OF HEALTH

Walter L. Bierring

Increase In Meningitis

During World War I, cases of meningococcus meningitis in the Army of the United States numbered 5,839 and deaths 2,279, a case fatality of 39 per cent.[1]

REPORTED PREVALENCE IN THE UNITED STATES 1942 AND 1943

The issues of the Health Officers' Weekly Statement, prepared by the United States Public Health Service, show a striking increase in reported incidence of meningococcus meningitis for weeks ending Saturday from January 2, 1943, through April 3, 1943, as compared with corresponding weeks in 1942. Figures for the country as a whole appear in the following table[2]:

TABLE I

Meningococcus Meningitis in the United States
Reported Occurrence of Cases for the First Fourteen Weeks of 1943
Compared with the Same Period in 1942

Week Ending Saturday	1943	1942	Corresponding Week, '42
Jan. 2, 1943	187	47	Jan. 3, 1942
Jan. 9, 1943	278	45	Jan. 10, 1942
Jan. 16, 1943	298	68	Jan. 17, 1942
Jan. 23, 1943	354	52	Jan. 24, 1942
Jan. 30, 1943	337	65	Jan. 31, 1942
Feb. 6, 1943	330	60	Feb. 7, 1942
Feb. 13, 1943	446	42	Feb. 14, 1943
Feb. 20, 1943	398	84	Feb. 21, 1943
Feb. 27, 1943	503	87	Feb. 28, 1942
Mar. 6, 1943	556	70	Mar. 7, 1492
Mar. 13, 1943	525	88	Mar. 14, 1942
*Mar. 20, 1943	*	*	Mar. 21, 1943
Mar. 27, 1943	572	90	Mar. 28, 1942
Apr. 3, 1943	595	110	Apr. 4, 1942
Total 13 Weeks	5433	908	

*Issue and figures not at hand.

The increase in reported incidence in 1943 over 1942 is in general greater in the northern than in the southern states. For example, for the period included in Table I, the west-north central states (Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska and Kansas) reported ten times as many cases in 1943 as in 1942; during the same time the west-south central states (Arkansas, Louisiana, Oklahoma and Texas) reported three times more cases in 1943 than a year ago. In all of the states taken together, the reported incidence of meningococcus meningitis during January, February and March, 1943, was six times that of last year.

REPORTED PREVALENCE IN IOWA

Increase in the number of reports of meningitis in Iowa for the first three months and first half of Apirl, 1943, as compared with a year ago and with the average (expected number) for the nine-year period, 1934 to 1942, is shown in Table II:

TABLE II

Meningitis in Iowa

Month	Nine-Year Average Expected Number	1942	1943
January	3	2	3
February	4	0	3
March	4	0	4
April	2	1	*12

*Through April 15, 1943.

MORBIDITY AND MORTALITY IN IOWA

The following table presents information regarding the reported cases of and deaths from epidemic (meningococcus) meningitis in Iowa for the eleven-year period, 1932 to 1942:

TABLE III

Meningococcus Meningitis in Iowa
1932 to 1942

Year	Cases	Deaths
1932	35	25
1933	66	39
1934	55	28
1935	95	56
1936	107	58
1937	37	28
1938	43	16
1939	17	12
1940	28	9
1941	9	13
1942	9	3
Total	501	287

With 501 cases and 287 deaths, the case mortality in Iowa for the period 1932 to 1942 was 57 per cent. The incomplete reporting of cases is a probable factor to account for the relatively high case fatality rate.

DIAGNOSIS, TREATMENT AND PREVENTION

Dingle and Finland[3] have presented in *War Medicine* a very comprehensive review of meningococcus meningitis with 218 references.

Clinical diagnosis, according to these authors, is based on symptoms and signs due to sepsis, generalized infection, and meningeal irritation. Onset of the illness is usually sudden, accompanied by fever, malaise, headache, neck rigidity, nausea, and vomiting. A petechial or purpuric rash may be present. The rash is noted more frequently during an epidemic than in the sporadic form of the disease.

Bacteriologic diagnosis is made possible by examination of blood cultures, of spinal fluid and of specimens taken under proper conditions from the nasopharynx.

Until the advent of serum, treatment was symptomatic and supportive. Specific serum was probably the chief agent for a period of years in bringing about a definite lowering of the mortality rate. Chemotherapy with use of the sulfonamide drugs has decreased the case mortality rate in a remarkable manner. Sulfadiazine appears to be the drug of choice, with sulfathiazole next in line.

Preventive measures include avoidance of overcrowding, adequate ventilation, "hardening" of physical condition, attention to upper respiratory infections, and careful medical supervision.

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SPOTTED FEVER VACCINE

The State Department of Health has available for distribution to physicians, without cost, a limited supply of vaccine for active immunization against Rocky Mountain spotted fever. Made from the chick embryo by the method of Cox, the vaccine is supplied through courtesy of R. R. Parker, Ph.D., Director, Rocky Mountain Laboratory of the United States Public Health Service, Hamilton, Montana. The vaccine is designed for persons who reside in an area in which spotted fever is known to be endemic and whose occupation subjects them to frequent exposure to the wood tick.

PREVALENCE OF DISEASE

Disease	Mar. '43	Feb. '43	Mar. 42	Most Cases Reported From
Diphtheria	8	6	10	Johnson, Keokuk, Polk, Pottawattamie, Scott, Woodbury
Scarlet Fever	367	340	232	Des Moines, Dickinson, Polk, Scott, Washington, Woodbury
Typhoid Fever	3	3	2	Floyd, Marshall, Sac
Smallpox	3	2	0	Appanoose, Boone, Calhoun
Measles	1657	613	1445	Dubuque, Woodbury
Whooping Cough	112	97	107	Dubuque, Linn
Brucellosis	39	32	14	For the State
Chickenpox	469	392	496	Boone, Des Moines, Dubuque, Mahaska
German Measles	888	294	8	Boone, Washington
Influenza	11	4	14	Mitchell
Meningitis (meningococcus)	4	3	0	Polk, Dubuque
Mumps	567	428	764	Boone, Story, Webster, Woodbury
Pneumonia	91	99	238	Clinton
Poliomyelitis	1	2	0	Black Hawk
Tuberculosis	62	3	54	For the State
Tularemia	0	0	0	None
Gonorrhea	141	164	173	For the State
Syphilis	213	243	219	For the State

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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OFFICE OF PUBLICATION, DES MOINES, IOWA

Vol. XXXIII MAY, 1943 No. 5

THE CIVILIAN DOCTOR AND THE SICK SOLDIER

Because the army grants furloughs to enlisted men and leaves to officers, many civilian doctors will be called upon to care for some military person who is taken ill at home. The physician frequently does not know what he should do as far as administration is concerned. The following information should be of value:

It is well known that some soldiers do not leave home in time to return to their proper station before the expiration of their furlough. They know they will be absent without leave (AWOL) and they decide that by getting sick they may be able to fool the army and beat an AWOL status. One of the first things the civilian doctor should do, when called to attend a soldier who is not seriously ill, is to determine the expiration date and hour on the written furlough or pass. If the soldier is only indisposed and is fit to travel, he should be advised to proceed.

Other soldiers will become homesick and may feign illness to avoid returning to duty. Physicians can usually "spot" these cases promptly and they also should be instructed to return to their stations.

Because the army furnishes medical care and hospitalization, it follows that a sick soldier should avail himself of army facilities. Therefore, if a soldier becomes ill he should enter an army hospital as soon as possible. He thus secures good medical care without expense to himself, without undue expense to the Government, and saves his furlough time.

The army does not want its sick personnel to be neglected, however, and has made provisions for necessary civilian medical care in cases in which the soldier *cannot* enter an army hospital immediately.

It is assumed that all civilian doctors will be honest with themselves and the Government.

If a soldier becomes ill enough to require confinement at home or in a hospital (or with a contagious disease), he may be given care as any civilian. Certain reports are necessary, however, and especially if he will be unable to return to his station before expiration of his leave, pass or furlough. The patient, the physician, or the local Red Cross representative should telegraph the soldier's immediate commanding officer at his home station and the Surgeon, Seventh Service Command Headquarters, Omaha, Nebraska, giving the patient's name, army serial number, organization, station, and diagnosis, and probable length of hospitalization. Copies of these telegrams should be retained, since they will be needed later.

After the telegrams have been sent, the patient should remain under the care of the hospital or physician until directions for moving him have been received from the military authorities.

The military authorities will make arrangements with the civilian hospital, if the patient is hospitalized, or with the civilian physicians for transportation of the soldier to the nearest army hospital as soon as the patient can be transferred with safety. It is desired that common carrier transportation be used whenever possible to conserve gasoline and rubber.

When the patient is admitted to an army hospital, the civilian hospital, civilian doctor, special nurses, and the person who furnished ambulance service to the civilian hospital should submit statements to the commanding officer of the army hospital, minutely itemizing all charges. The number and type of calls made, with the date of each call and the charge, should be shown. Medications given should be itemized with their unit cost. Charges for special services should be listed separately and completely itemized. If an anesthetic is given by a regular employee of the hospital, it may be billed as one item on the hospital statement; if, however, it is administered by a physician or anesthetist not employed on a salary basis, a separate statement should be prepared by the anesthetist. Costs for sending necessary telegrams should be billed by the hospital or the physician and should be supported by copies of the telegrams.

Upon receipt of these statements for services rendered, the commanding officer of the army hospital will prepare a voucher for each claimant and return it to the claimant for his signature. After signature, it is to be returned to the commanding officer, who will forward it through military channels to the Surgeon General, Washington, D. C., for payment if it is found properly payable from public funds.

INVALID DIETS AND FOOD RATIONING

The Journal has received a request from Dr. Russell M. Wilder, Chief of the Civilian Food Requirements Branch in Washington, to give publicity through its pages to official information regarding diets for invalids who may need additional rationed foods and the procedure which the physician should follow in meeting his patients' needs. The following explanation has been prepared under the direction of Dr. E. B. Winnett of Des Moines, who is cooperating with the Office of Price Administration in clarifying for physicians some of the details involved in the program.

Recently rationed food commodities include processed, dried, and frozen fruits and vegetables, and butter, cheese, fats, and meat. In former years unlimited quantities of these foods were taken as a matter of course, with the only restrictions being those imposed by pocketbooks. Now, with the increased food demands of our fighting forces and the amount furnished to our allies, it is absolutely necessary that the remaining supply be rationed in order that the civilian populace receive equitable portions.

Once again the physicians of America are called upon to play an important part in a vital program. It is recognized by the Government that for dietary reasons various individuals require more rationed foods than the amounts allowed through the use of war ration books. The actual mechanics of making application for additional allotments are fairly simple when understood, and it is here that all physicians who understand the procedure may render a great service to the local rationing boards, as well as to their patients.

It is necessary that the patient obtain from his local board Form R-315, upon which application will be made. The patient himself will complete the application form, but the application must be accompanied by a statement from his physician which includes the following information: The reason the patient needs additional rationed foods; the amount and types he will need during the next two-month period; and why he cannot use unrationed foods. When the physician has supplied this information, his obligation ends. It is the responsibility of the local board to change the amounts of rationed foods into points, and issue the patient a certificate after deducting the amount procurable through the use of his war ration book.

The official point value table is broken down into the different types of foods, showing the point value of the different size cans in ounces. For instance, what is generally known as the No. 2 can falls in the classification of over 1 lb. 2 oz. to and including 1 lb. 6 oz. Instead of indicating a so-called No. 2½ can, the classification would be that of over 1 lb. 11 oz. to and including 2 lb. The popular size fruit and vegetable juice can of 46 oz. falls in the classification of over 2 lb. 12 oz. to and including 3 lb.

The majority of applications for additional foods come from diabetic individuals, although there are, of course, a multitude of reasons why a patient may require a more complete diet than can be afforded through the use of the ration books. Extra food may be needed for the patients with ulcers, certain allergies, goiters, irritability of the gastro-intestinal tract, or those with other illnesses for which the physician feels a dietary regime is necessary. In such instances the procedure on the part of the physician is the same as for the diabetic patient.

The following certification and diet list has been prepared for the Office of Price Administration and could be adopted as a sample diet for diabetic patients:

To the War Price and Rationing Board:

This is to certify that ....., ... is under my care and needs a special diet of rationed foods because ..... Also this patient cannot use unrationed foods because .....

Below is the list of foods and amounts which he (she) needs for the next two months.

Kinds of Food	Amount (in pounds)
3% vegetable which includes green beans, spinach, tomatoes, tomato juice, asparagus	15
9% vegetable which includes beets, peas, carrots, onions	15
12% fruits and juices which include peaches, apricots, oranges, plums, prunes, pineapple	15
Butter	4¼
Edible meat	24
Or fresh meat	30
Bacon	6
Lard or oleomargarine	1½

Signed.....M.D.

Not every diabetic patient will require the above amount of food, and a few who do hard manual labor will need more. The physician can easily add to or subtract from this sample diet, according to the diet prescription. Also, the physician should remember that fresh fruits and vegetables can be purchased without ration stamps.

If every physician is conscious of his obligation in ordering for his patients the least possible amount of rationed foods, specifying only those absolutely necessary and for which unrationed substitutes are not available, it is evident that the physicians of America can save for our fighting forces and allies thousands of pounds of this war's most vital weapon—food.

WAR CONFERENCE

The American Association of Industrial Physicians and Surgeons, the American Industrial Hygiene Association, and the National Conference of Governmental Hygienists are combining their annual meetings in a four-day War Conference at Rochester, New York, May 24 to 27, 1943. This joint meeting will be a report on the state of the nation, by men who know, in matters of industrial health.

Physicians and surgeons, hygienists, engineers, nurses, executives—all who are interested in the problems of industrial health and their solution—are invited to attend. No registration fee is required.

HYPERTENSION IN PEOPLE OVER FORTY

Master, Marks, and Dack report in the April 17 issue of the *Journal of the American Medical Association* a study of blood pressure in nearly 15,000 men and women over the age of forty. There were 8,483 men and 6,366 women. It is pointed out that the incidence of hypertension in persons over forty years of age has become increasingly important because there are now millions of people who survive this age.

On the basis of the customary limit of hypertension, 150 and/or 90 or over, the authors found that a little over one-fourth of the men have hypertension at ages forty to forty-nine, a little over two-fifths in the next decade, considerably more than half in those sixty to sixty-nine, nearly two-thirds in those seventy to seventy-nine, and slightly more in the ninth decade. Among the women in the age group forty to forty-nine, almost a third have hypertension, more than half in the next decade, more than two-thirds in the seventh decade, and about three-fourths in the eighth and ninth decades. If the lowest limit is used of what is considered to be the dividing line between normal pressure and hypertension, namely 140 and/or 90 or over, the proportions of persons with hypertension in the various age groups is correspondingly higher. Applied to the population as a whole, these latter findings indicate that practically half the male population and 60 per cent of the female population forty years of age and over are hypertensive.

The authors conclude that the presence of hypertension at the age of forty and over is so common that a mild degree and perhaps even "moderate" degree can no longer be considered abnormal. Limits of normal blood pressure at these ages should therefore be raised.

SELECTIVE SERVICE REGULATIONS FOR PRELIMINARY EXAMINATION OF REGISTRANTS

One of the big tasks undertaken by civilian physicians is the preliminary examination of registrants who are to be inducted into all branches of the military service. Colonel L. G. Rowntree, Chief of the Medical Division, National Headquarters of Selective Service System in Washington, in a communication to the JOURNAL states that Selective Service is much impressed with the devotion and the patriotism of its examining physicians and dentists. This contribution represents a national service of great magnitude and importance.

Under date of March 1, 1943, Selective Service issued Medical Circular No. 3, the purpose of which is to guide physicians and dentists in the preliminary physical examination of registrants to the end that all selectees will be physically examined and processed locally in like manner. Each examining physician and dentist is urged to familiarize himself thoroughly with the details of the regulations as set forth in this circular, and then adhere rigidly to the regulations. The objective is to disqualify all registrants locally who have manifestly disqualifying defects and forward all qualified registrants to the examining and induction station. All examinations are to be conducted while the registrant is in the nude. The examining physician may report to the local board that a registrant is suffering from a condition listed in the List of Defects (Form 220), basing his report upon one or more of the following: (1) the physical examination of the registrant while he is before him; (2) his personal professional knowledge of the registrant's physical condition; (3) an acceptable affidavit from a reputable physician to the effect that such physician has personal professional knowledge of the registrant's physical condition, provided such affidavit is filed with the local board; or (4) an official statement from a Government or State agency concerning the physical condition of the registrant (including a statement concerning a registrant who has been cared for in St. Elizabeth's Hospital, Washington, D. C., or in a Veterans' Administration Facility), provided such statement is filed with the local board.

Because the JOURNAL feels it may be informative and of interest to its readers, it is publishing the list of the defects which disqualify a registrant for service in any branch of the armed forces and which place the registrant in Class IV-F.

List of Defects by Systems

General

Actinomycosis.
Acute diseases, other than venereal. (Reconsider after recovery.)
Acute or chronic rheumatic fever, or with history of recurrent attacks.
Addison's Disease.
Albino.
Alcoholism, chronic, to such a degree that it interferes with earning a living in civil life.
Alopecia universalis.
Anemia, pernicious.
Aphonia.
Arthritis, chronic, with deformity, disabling or with symptoms.
Atrophies and dystrophies, muscular, which are obviously disqualifying.
Carcinoma or other malignant disease of any organ or part of the body.
Disease, malignant, of any organ or part of the body.
Drug addiction.
Fistula, urinary, abdominal, osseous or postoperative.
Fractures, ununited.
Goitre, exophthalmic.
Hodgkin's Disease.
Immaturity as manifested by infantilism, or failure of development of secondary sex characteristics. Recheck in six months.
Jaundice in a degree and kind beyond any question of a doubt. Recheck in six months.
Leprosy.
Leukemia of any type.
Lymph nodes, enlargement of, in leukemia or Hodgkin's Disease.
Lymph nodes, tuberculous.
Lymphosarcoma.
Malignant disease of any organ or part of the body.
Metallic poisoning, chronic, except argyria.
Myxedema.
Osteomyelitis, active, of any bone, or a substantial history of osteomyelitis of any of the long bones within the past five years.
Paget's Disease (osteitis deformans).

Pellagra.
Purpura.
Stammering or stuttering to such a degree that the registrant is unable to express himself clearly or to repeat commands.
Syphilis, cerebrospinal, cardiovascular, visceral.
Tuberculosis, active, of any part of the body.

Weight

Overweight, excessive, which is greatly out of proportion to the height if sufficient to interfere with normal activity or with proper training.

Eyes

Adhesions of the lids to each other or to the eyeball.
Blindness, total.
Coloboma of iris, severe.
Cornea, ulcer of.
Eyelid, or eyelids, condition of, such as inversion and eversion of such degree that forcible closure fails to cover the eyeball or in which there is a resultant conjunctival inflammation, corneal irritation, or a restriction of the rotation of the eyeball.
Eyes, abnormal condition of, due to disease of the brain.
Eyes, disfiguring scars of.
Glaucoma.
Keratitis.
Lagophthalmos, if associated with signs of hyperthyroidism.
Orbit, any tumor of.
Ptosis of eyelids interfering with vision.
Strabismus, permanent, or well marked.
Trachoma.
Xerophthalmia.

Ears

Atresia, of one or both external auditory canals.
Deafness, total.

Mouth, Nose, Pharynx, Trachea, Esophagus, and Larynx

Aphonia.
Atrophic rhinitis, chronic, with offensive odor (ozena).
Cleft palate, with or without phosthetic appliance.
Deformities of the nose, throat, and mouth, which interfere with the mastication of ordinary food, with speech, or with breathing, or that create an unsightly condition.
Esophagus, destructive lesions of.
Jaws, diseases of, and of associated structures which are likely to incapacitate the individual for satisfactory performance of duty. Extensive loss of oral tissue in an amount that would prevent replacement of missing teeth by a satisfactory denture.
Laryngeal paralysis, due to any causes.
Larynx, destructive lesions of.
Nose, destructive lesions of.
Nose, deformities of, which interfere with mastication of ordinary food, with speech, or with breathing, or which create an unsightly condition.
Rhinitis, atrophic, chronic, with offensive odor (ozena).
Throat, destructive lesions of.
Tracheostomy.

Skin

Alopecia universalis.
Dermatitis herpetiformis.
Elephantiasis.
Epidermolysis, bullosa.
Fungoides, mycosis.
Impetigo, chronic.
Jaundice in a degree and kind beyond any question of doubt. Recheck in six months.
Lupus vulgaris.
Pemphigus, chronic.
Purpura.
Scars, adherent or disfiguring to such an extent as to be unsightly or which interfere with function of a limb or part to such a degree as to prevent satisfactory performance of service in the armed forces.
Sycosis (barber's itch or other types). Reconsider after recovery.
Ulcers, chronic, if severe in degree or associated with varicose veins.

Head

Exostosis of skull, large, which will prevent the individual from wearing headgear of any branch of the armed forces.
Hernia of the brain.
Hydrocephalus or monstrosity of the head.
Skull, deformities of, of any degree associated with evidences of diseases of the brain, spinal cord or peripheral nerves.
Skull, depression of, of a serious degree.
Tumor of the brain.

Spine, Scapulae, and Sacro-iliac Joints

Curvature of spine, if greater than three inches in lateral deviation, or kyphosis or lordosis, severe enough to prevent wearing of equipment or uniform.
Deformities, postural, associated with disease of the sacro-iliac and lumbosacral joints obviously associated with muscular spasm, and limitation of motion in the lumbar region of the spine, and if malingering is definitely excluded.
Fractures of the vertebrae or pelvic bones, with associated disqualifying rigidity.
Hip, diseases of, which seriously interfere with function and weight-bearing power.
Osteo-arthritis, complete or partial, of the spinal column.
Spondylitis, disabling or deforming.
Tuberculosis, healed, of any portion of the vertebral column.

Extremities

Amputation of an arm or leg, or complete or partial loss of a hand or a foot.
Arch, transverse of foot, obliteration of, associated with permanent flexion of the small toes (claw toes) or with symptoms.
Arm, amputation of.
Atrophies and dystrophies, muscular, which are obviously disqualfying.
Bone, diseases or defromities of, which seriously interfere with the weight-bearing function, with the full use of the limbs or which would prevent the performance of full duty as members of the armed forces.
Bone, tuberculosis of.
Clubfoot, if marked in degree or which interferes with the wearing of a military shoe.
Contraction of muscle, or paralysis, which disturbs function to the degree of interference with service.
Deformities, congenital, or due to fracture, injury, or disease, which seriously interfere with function and weight-bearing power.
Dislocations, old, unreduced.
Extremity, loss of.
Fingers, loss of more than three entire fingers of one hand.
Fractures, ununited.
Hallux valgus (displacement of great toe toward the other toes) if severe and associated with marked exostosis or bunion, especially when there are signs of irritation above the joint.
Hand, complete or partial loss of.
Hemiplegia.
Hip, diseases of, which seriously interfere with function and weight-bearing power.
Joint, tuberculosis of.
Knee, diseases of, which interfere with function and weight-bearing power.
Leg, amputation of.
Paraplegia.
Peripheral vascular diseases with manifest pathology.
Pes planus (flat feet) if accompanied by marked symptoms and deformity.
Thumbs, loss of both.

Neck

Contraction, spastic, of the muscles of the neck if sufficient to prevent free rotation.
Exophthalmic goitre.
Lymph nodes, enlargement of, in leukemia or Hodgkin's Disease.
Lymph nodes, tuberculous.
Lymphosarcoma.
Thyroid enlargement from any cause associated with toxic symptoms, or not associated with toxic symptoms but of sufficient size to interfere with wearing of uniform or equipment.
Tracheostomy.

Lungs and Chest Wall

Asthma, chronic.
Abscess of the lung.
Bronchitis, chronic, with emphysema.
Chest wall, tuberculosis of.
Emphysema.
Empyema.
Lungs, tuberculosis of, active or authentic history of treatment for within preceding five years.
Ribs, tuberculosis of, and other parts of the chest wall.
Sinus of the chest wall.

Heart, Blood Vessels, and Circulation

Circulatory failure, evidenced by definite symptoms such as a combination of breathlessness, cyanosis, and edema.
Dilatation of the heart, and hypertrophy evidenced by displacement of the apex impulse to the left of the midclavicular line or below the sixth rib.
Hemiplegia.
Peripheral vascular diseases with manifest pathology.
Varicose veins, if severe in degree or associated with edema, or with present or previous ulcer of the skin.

Abdominal Organs and Walls

Anus, fistula of.
Feces, incontinence of.
Hemorrhoids, external or internal, associated with prolapse of the rectum.
Hernia, complete, operable, or inoperable.
Paralysis, sphincter of the anus.
Peptic ulcer, active, confirmed by x-ray.
Prolapse of the rectum.
Sinus of the abdominal wall.
Spleen, great enlargement of, from any cause.

Genito-Urinary Organs and Venereal Diseases

Enuresis, continuous from childhood.
Epispadias, if of a degree to interfere with normal micturition.
Hermaphroditism.
Hypospadias, when opening is proximal to coronal sulcus.
Incontinence of urine.
Nephritis, acute or chronic.
Penis, amputation of, if the resulting stump is insufficient to permit normal function of micturition.
Syphilis, cerebrospinal, cardiovascular, visceral.
Urinary fistula.

Endocrine and Metabolic Disorders

Achondroplasia.
Acromegaly or gigantism, if marked disfiguring or if associated with other symptoms of severe pituitary dysfunction.
Cretinism.
Diabetes insipidus, moderate or severe.
Diabetes mellitus, if severe or if necessitating the constant administration of insulin.
Dwarfism.
Fröhlich's Syndrome, if severe.
Hypoglycemia, chronic, persistent, to such a degree that it interferes with earning a living in civil life.

Immaturity as manifested by infantilism or failure of development of secondary sex characteristics. Recheck in six months.
Myxedema.
Pellagra.
Xerophthalmia.

Diseases of Blood and Blood-forming Tissues

Anemia, pernicious.
Leukemia of any type.
Purpura.

Mental and Nervous Disorders

Aphonia.
Brain, disease of.
Enuresis, continuous from childhood.
Epilepsy.
Hemiplegia.
Hernia of the brain.
Idiocy.
Imbecility.
Insanity with commitment, or history of commitment, or with authentic medical history of treatment for insanity without commitment.
Multiple sclerosis.
Mutism.
Paralysis, hysterical.
Paraplegia.
Parkinsonian syndrome, marked.
Sex perversion.
Stammering or stuttering to such a degree that the registrant is unable to express himself clearly or to repeat commands.
Tumor of the brain.

SYMPOSIUM OF OBSTETRICAL ANALGESIA AND ANESTHESIA

The Department of Obstetrics and Gynecology of the University of Nebraska College of Medicine will present a symposium on obstetrical analgesia and anesthesia at the University Hospital, Forty-second and Dewey Avenue, Omaha, Nebraska, on Friday, May 28, 1943, in cooperation with the Nebraska State Medical Association and the Division of Maternal and Child Health, State Department of Health.

Guest speakers will be F. S. Hartman, M.D., Pathologist, Henry Ford Hospital, Detroit, Michigan; R. A. Hingson, M.D., Anesthetist, Passed Assistant Surgeon, United States Public Health Service, Staten Island, New York; R. N. Kretzschmar, M.D., Obstetrician, Associate Professor of Obstetrics and Gynecology, University Hospital, Ann Arbor, Michigan; A. H. Parmalee, M.D., Pediatrist, Associate Professor of Pediatrics, Rush Medical College, Chicago, Illinois; and members of the faculty of the University of Nebraska College of Medicine.

PROGRAM

Friday Morning, May 28
Chairman, Dr. King

9:00 Registration.
Late Bulletins.
Announcements.
9:30 Continuous Caudal Analgesia and Anesthesia in Obstetrics—Dr. Hingson.
10:00 Demonstration of Technique of Caudal Anesthesia—Dr. Hingson.
10:45 Operative Clinic (Caesarean Section Under Caudal Anesthesia)—Dr. Kretzschmar.
12:30 Luncheon—Blackstone Hotel.

Friday Afternoon, May 28
Chairman, Dr. Claude Selby

2:00 Clinical and Pharmacological Consideration of the Choice of Drugs in Obstetrical Analgesia and Anesthesia—Dr. McIntyre.
2:45 Tissue Changes Observed Under Deep Sedation and Anoxemia—Dr. Hartman.
3:30 The Obstetrician's Point of View of Analgesia and Anesthesia—Dr. Kretzschmar.
4:15 The Experience at the University Hospital in Continuous Caudal Analgesia and Anesthesia—Dr. Brown.
5:00 Cocktails.

Friday Night, May 28
Chairman, Dr. C. W. M. Poynter

6:30 Dinner—Blackstone Hotel.
8:00 "Painless Labor, Please"—Moderator, Dr. E. C. Sage.
Panel of Experts—Dr. Hartman, Pathologist; Dr. Hingson, Anesthetist; Dr. Kretzschmar, Obstetrician; Dr. McIntyre, Pharmacologist; Dr. Parmalee, Pediatrist.
8:30 Continuous Caudal Anesthesia in Surgery—Dr. Hingson.
9:00 Colored Moving Pictures of Intra-Uterine Fetal Respiratory Movements and the Effect of Drugs on These Movements—Dr. Kretzschmar.
9:30 The Pediatrist Looks at Obstetric Analgesia and Anesthesia—Dr. Parmalee.

Saturday Morning, May 29

Demonstration of Continuous Caudal Anesthesia in Obstetrical Surgery—Dr. Hingson. Hospitals and cases to be announced.

Advance Registration: In order to make arrangements and to expedite the meeting the Committee would appreciate advance notification of the physicians who plan to attend. Please indicate on a postcard your intention of attending this symposium and forward to Willis E. Brown, M.D., University Hospital, Omaha, Nebraska.

SIGHT SAVING PROGRAM AT THE IOWA SCHOOL FOR THE BLIND

An appropriation has been granted the State Board of Education by the Fiftieth General Assembly to establish a sight saving class at the Iowa School for the Blind when school opens September 7, 1943. The school is planning to equip a classroom that will meet the sight saving standards set forth by the National Society for the Prevention of Blindness which includes special artificial lighting, window shades, blackboards, large type books, sight saving desks and bulletin type typewriters. A teacher with special training in sight saving will be employed to handle the schoolroom work.

Children may be considered eligible for sight saving classes if they are in any of the following groups: children having a visual acuity between 20/70 and 20/200 in the better eye, after refraction; children with progressive eye difficulties; and children suffering from non-communicable diseases of the eye or diseases of the body that seriously affect vision.

For more detailed information about this special service, inquiries may be addressed to Mrs. E. Channing Evans, Field Worker for the Blind, 843 Euclid Avenue, Des Moines, Iowa, or the superintendent of the Iowa School for the Blind, Vinton, Iowa.

Roster of Iowa Physicians in Military Service

As of April 23, 1943

Adair County

Cornell, D. D., Greenfield (APO 41, San Francisco, Cal.) ..... Capt., A.U.S.
Gantz, A. J., Greenfield (APO Los Angeles, Cal.) .. Capt., A.U.S.

Adams County

Willett, W. J., Carbon (Camp Maxey, Tex.) ..... Capt., A.U.S.

Allamakee County

Hogan, P. W., Waukon
Ivens, M. H., Waukon (Camp Shelby, La.)
Kiesau M. F., Postville (Fort Leonard Wood, Mo.)
Rominger, C. R., Waukon (Camp Claiborne, La.) ..... A.U.S.

Appanoose County

Condon, F. J., Centerville (Bethesda, Md.) .... Major, U.S.P.H.S.
Edwards, R. R., Centerville (Trenton, N. J.) ..... 1st Lt., A.U.S.
Huston, M. D., Centerville (Lowry Field, Colo.) .... Capt., A.U.S.

Audubon County

Koehne, F. D., Audubon (Oroville, Wash.)

Benton County

Koontz, L. W., Vinton (Carmel, Cal.) ..... Capt., A.U.S.
Senfeld, Sidney, Belle Plaine

Black Hawk County

Bickley, D. W., Waterloo (Camp Howze, Texas) .... 1st Lt., A.U.S.
Bickley, J. W., Waterloo (Fort Sill. Okla.) ..... 1st Lt., A.U.S.
Butts, J. H., Waterloo (Memphis, Tenn.) .. Lt. Comdr., U.S.N.R.
Cooper, C. N., Waterloo (Seattle, Wash.) ... Lt. Comdr., U.S.N.R.
Ellyson, C. D., Waterloo (Norfolk, Va.) ..... Lt. (jg) U.S.N.R.
Hartman, H. J., Waterloo (Fort Lewis, Wash.) .. Capt., A.U.S.
Henderson, L. J., Cedar Falls (Camp White, Ore.) .. Capt., A.U.S.
Hoyt, C. N., Cedar Falls (McClellan Field, Ala.) . 1st Lt., A.U.S.
Ludwick, A. L., Waterloo (APO 813, New York, N. Y.) ..... Capt., A.U.S.
Marquis, F. M., Waterloo (Camp Robinson, Ark.) .. Capt., A.U.S.
O'Keefe, P. T., Waterloo (Nashville, Tenn.) ..... Capt., A.U.S.
Paige, R. T., LaPorte City (Des Moines, Ia.) . Lt. Comdr., U.S.N.R.
Rohlf, E. L., Jr., Waterloo (APO New York, N. Y.) ..... 1st. Lt., A.U.S.
Seibert, C. W., Waterloo (Fort Wright, Wash.) Capt., A.U.S.
Smith, E. E., Waterloo (Scott Field, Ill.) ..... Major, A.U.S.
Smith, R. I., Waterloo (Reno, Nevada) ..... 1st Lt., A.U.S.
Smith, R. G., Cedar Falls (APO 512, New York, N. Y.) ..... Major, A.U.S.
Trunnell, T. L., Waterloo (care P.M., New York, N. Y.) ..... Lt. (jg), U.S.N.R.

Boone County

Brewster, E. S., Boone (Camp Chaffee, Ark.) .... Major, A.U.S.
Healy, M. D., Boone
Shane, R. S., Pilot Mound (Des Moines, Ia.) Lt. Col., A.U.S.

Bremer County

Amlie, P. J., Tripoli (Des Moines, Ia.)
Blum, O. S., Waverly (Bremerton, Wash.) ..... Lt., U.S.N.R.
Rathe, H. W., Waverly (Fort Jackson, S. C.) ..... Capt., A.U.S.

Buchanan County

Barton, J. C., Independence (Camp McCain, Miss.) . Lt. Col., A.U.S.
Hersey, N. L., Independence (San Diego, Cal.) ..... Lt. Comdr., U.S.N.R.
Leehey, P. J., Independence (APO 957, San Francisco, Cal.) ..... Capt., A.U.S.
Loeck, J. F., Aurora (Camp Rucker, Ala.) ..... Capt., A.U.S.

Buena Vista County

Almquist, R. E., Albert City (Camp Shelby, Miss.) . Capt., A.U.S.
Brecher, P. W., Storm Lake (Camp White, Ore.) Major, A.U.S.
Mailliard, R. E., Storm Lake (APO 254, Los Angeles, Cal.) ..... Major, A.U.S.
Shope, C. D., Storm Lake (Fort Des Moines, Ia.) 1st Lt., A.U.S.
Witte, H. J., Storm Lake (Omaha, Neb.) ..... Major, A.U.S.

Butler County

Anderson, B. V., Greene (Fleet PO, Seattle, Wash.) .... U.S.N.R.
James, R. O., Allison (Mare Island, Cal.)
Rolfs, F. O., Parkersburg (Springfield, Mo.)

Calhoun County

Grinley, A. V., Rockwell City (APO 507, New York, N. Y.) ..... 1st Lt., A.U.S.
Hobart, F. W., Lake City (Camp Grant, Ill.) .... Capt., A.U.S.
Peek, L. H., Lake City (Jefferson Barracks, Mo.) .. Capt., A.U.S.
Stevenson, W. W., Rockwell City (Port Hueneme Cal.) ..... Lt. Comdr., U.S.N.R.
Weyer, J. J., Lohrville (Camp Carson, Colo.) .... 1st Lt., A.U.S.

Carroll County

Anneberg, A. R., Carroll (Camp Barkeley, Texas)
Anneberg, W. A., Carroll
Cochran, J. L., Carroll (Gulfport, Miss.)
Cross, D. L., Coon Rapids ..... Lt., U.S.N.R.
Freedland, Maurice, Coon Rapids
Morrison, J. R., Carroll (Camp Maxey, Texas)
Morrison, R. B., Carroll (Muroc, California) .... 1st. Lt., A.U.S.
Pascoe, P. L., Carroll (Bowman Field, Ky.)
Scannell, R. C., Carroll (APO, New York, N. Y.)
Tindall, R. N., Coon Rapids
Wyatt, M. R., Manning (Desert Center, Cal.) .... 1st Lt., A.U.S.

Cass County

Egbert, D. S., Atlantic (Fort Snelling, Minn.) Major, A.U.S.
Longstreth, C. M., Atlantic (Norman, Okla) . Lt. Comdr., U.S.N.R.
Needles, R. M., Atlantic (Camp Polk, La.) ..... Capt., A.U.S.
Petersen, M. T., Atlantic (Camp Gruber, Okla.) .... Capt., A.U.S.

Cedar County

Mosher, M. L., West Branch (Camp Gruber, Okla.) ..... Capt., A.U.S.
O'Neal, H. E., Tipton (Pine Camp, N. Y.) ..... Major, A.U.S.

Cerro Gordo County

Adams, C. O., Mason City (Brigham City, Utah) ... Capt., A.U.S.
Egloff, W. C., Mason City (Mesa, Ariz.)
Flickinger, R. R., Mason City (Carlisle Barracks, Penn.) ..... 1st. Lt., A.U.S.
Hale, A. E., Mason City (Camp Hale, Colo.)
Harris. R. H., Mason City (Columbus, Ohio)
Harrison, G. E., Mason City (Boston, Mass.) ..... Col., A.U.S.
Houlahan, J. E., Mason City (Sacramento, Cal.)
Lannon, J. W., Clear Lake (APO 668, New York, N. Y.) ..... Capt., A.U.S.
Long, D. L., Mason City (Santa Ana, Cal.)
Marinos, H. G., Mason City (APO San Francisco, Cal.)
Sternhill, Irving, Mason City (APO New York, N. Y.)

Cherokee County

Bullock, G. D., Washta (Camp Livingston, La.) .... Capt., A.U.S.
Ihle, C. W., Jr., Cleghorn (Fort Leonard Wood, Mo.) ..... Capt., A.U.S.
Noble, R. P., Cherokee (Rapid City, S. Dak.) ..... Capt., A.U.S.
Swift, C. H., Jr., Marcus (Fort Bliss, Texas) .... Capt., A.U.S.

Chickasaw County

Caulfield, J. D., New Hampton (Denver, Colo.) .... Capt., A.U.S.
Murphey, A. L., Fredericksburg (APO 827, New Orleans, La.) ..... Capt., A.U.S.
O'Connor, E. C., New Hampton (Camp Crowder, Mo.) ..... Capt., A.U.S.
Richmond, P. C., New Hampton (Camp Gruber, Okla.) ..... Capt. A.U.S.

Clay County

Adams, G. W., Royal (Fort Clayton, Panama Canal Zone)
Edington, F. D., Spencer (Lowry Field, Colo.) ..... Col., A.U.S.
Jones, C. C., Spencer (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
King, D. H., Spencer (Spokane, Wash.) ..... Capt., A.U.S.

Clayton County

Anderson, H. M., Strawberry Point (Camp Crowder, Mo.) ..... 1st Lt., A.U.S.
Rhomberg, E. B., Guttenberg (Camp Wallace, Texas) . Capt., A.U.S.

Clinton County

Amesbury, H. A., Clinton (Vancouver, Wash.)
Burke, J. C., Clinton (Laredo, Tex.)
Ellison, G. M., Clinton (Washington, D. C.) ..... 1st Lt., A.U.S.
Hill, D. E., Clinton
King, R. C., Clinton (Camp Chaffee, Ark.)
Lenaghan, R. T., Clinton (Farragut, Idaho)
Meyer, A. K., Clinton (Denver, Colo.)
Norment, J. E., Clinton (Mare Island, Cal.)
Riedesel, E. V., Wheatland (Fort Douglas, Utah)
Snyder, D. C., De Witt
Van Epps, E. F., Clinton (Palm Springs, Cal.) ..... Capt., A.U.S.
Waggoner, C. V., Clinton (Seattle, Wash.) .. Lt. Cmdr., U.S.N.R.

Crawford County

Fee, C. H., Denison (Bowman Field, Ky.)
Maire, E. J., Vail (San Francisco, Cal.)
Wetrich, M. F., Manilla (San Antonio, Tex.)

Dallas-Guthrie Counties

Fail, C. S., Adel (Hayden Lake, Idaho) ..... Lt., U.S.N.R.
Margolin, J. M., Perry (Ft. Sill, Okla.) ..... A.U.S.
McGilvra, R. I., Guthrie Center (San Diego, Cal.) .. Lt., U.S.N.R.
Mullmann, A. J., Adel (Washington, D. C.) ..... Capt., A.U.S.
Nicoll, C. A., Panora (Camp Chaffee, Ark.) ..... Capt., A.U.S.
Osborn, C. R., Dexter (San Francisco, Cal.) .... Lt. (jg), U.S.N.R.
Todd, D. W., Guthrie Center (Camp McCoy, Wis.) ..... 1st Lt., A.U.S.
Wilke, F. A., Woodward (APO 1060, New York, N. Y.) .. A.U.S.

Decatur County

Doss, W. N., Leon (APO 924, San Francisco, Cal.)
Gamet, E. E., Lamoni (Tacoma, Wash.)

Delaware County

Baumgarten, Oscar, Earlville (APO 307, Los Angeles, Cal.) . A.U.S.
Clark, R. E., Manchester (Fort Riley, Kan.) .... 1st Lt., A.U.S.

Des Moines County

Eigenfeld, M. L., Burlington (Camp Robinson, Ark.) ..... 1st. Lt., A.U.S.
Heitzman, P. O., Burlington (Fort Leonard Wood, Mo.)
Jenkins, G. D., Burlington (West Point, N. Y.) .... Lt. Col. A.U.S.
Lohmann, C. J., Burlington (Fort Lewis, Wash.)
McKitterick, J. C., Burlington (Davisville, R. I.)
Moerke, R. F., Burlington (Abilene, Texas) ..... 1st Lt., A.U.S.
Sage, E. C., Burlington ..... Lt. Comdr., U.S.N.R.

Dickinson County

Buchanan, J. J., Milford (Fleet PO, New York, N. Y.) ..... Lt. Comdr., U.S.N.R.
Henning, G. G., Milford (Camp Adair, Ore.) ..... Major, A.U.S.
Nicholson, C. G., Spirit Lake (Sawtelle, Cal.) ..... Capt., A.U.S.
Rodawig, D. F., Spirit Lake (Fort Hancock, N. J.) ..... Capt., A.U.S.

Dubuque County

Beddoes, M. G., Cascade (Kansas City, Mo.) .... Capt., A.U.S.
Conzett, D. C., Dubuque (Fort Riley, Kan.) ..... Lt. Col., A.U.S.
Cunningham, J. C., Dubuque (Meridian, Miss.) Capt., A.U.S.
Edstrom, Henry, Dubuque (Clinton, Iowa) ..... Major, A.U.S.

Entringer, A. J., Dubuque (APO San Francisco, Cal.) ....Capt., A.U.S.
Hall, C. B., Dubuque (San Antonio, Texas).....1st Lt., A.U.S.
Knoll, A. H., Dubuque (San Francisco, Cal.)....Major, A.U.S.
Langford, W. R., Epworth (APO 948, Seattle, Wash.) ....Capt., A.U.S.
Lavery, H. B., Dubuque (Washington, D. C.)....Lt. Col., A.U.S.
Leik, D. W., Dubuque (Douglas, Ariz.).....1st Lt., A.U.S.
Mueller, J. J., Dubuque (Hattiesburg, Miss.)....1st Lt., A.U.S.
Olson, P. F., Dubuque (Fleet PO, Seattle, Wash.)....Lt., U.S.N.R.
Painter, R. C., Dubuque (care PM, San Francisco, Cal.) ....Lt. (jg), U.S.N.R.
Paulus, J. W., Dubuque (Camp Merced, Cal.)....1st Lt., A.U.S.
Plankers, A. G., Dubuque (APO New York, N. Y.) Major, A.U.S.
Quinn, F. P., Dubuque (Carlisle Barracks, Penn.).Major, A.U.S.
Scharle, Theodore, Dubuque (Fort Lawton, Wash.) Capt., A.U.S.
Schueller, C. J., Dubuque (Camp Barkeley, Texas) 1st Lt., A.U.S.
Sharpe, D. C., Dubuque (Fort Leonard Wood, Mo.)..Capt., A.U.S.
Smith, C. W., Dubuque (care PM, San Francisco, Cal.) ....Lt. (jg), U.S.N.R.
Steffens, L. F., Dubuque (Camp Chaffee, Ark.)..Lt. Col., A.U.S.
Straub, J. J., Dubuque (care PM, San Francisco, Cal.) ....Lt., U.S.N.R.
Ward, D. F., Dubuque (Fleet PO, San Francisco, Cal.) ....Lt. Comdr., U.S.N.R.

Emmet County

Clark, J. P., Estherville (Fort Sam Houston, Texas) ....Capt., A.U.S.
Miller, O. H., Estherville (Gowen Field, Idaho) ....Lt. Comdr., U.S.N.R.

Fayette County

Belding, Leland, Waucoma
Camp, D. E., West Union (Camp Blanding, Fla.)...Capt.. A.U.S.
Gallagher, J. P., Oelwein (Camp Elliott, Cal.)....Lt., U.S.N.R.
Henderson, W. B., Oelwein (St. Louis, Mo.).....Major, A.U.S.
Hess, A. M., West Union (Randolph Field, Texas) ....1st Lt., A.U.S.
Moen, H. P., West Union (Camp Barkeley, Texas)..Capt., A.U.S
Sulzbach, John, Oelwein

Floyd County

Baltzell, W. C., Charles City (Camp McCoy, Wis.)..Capt., A.U.S.
Flater, N. C., Floyd (Rockford, Ill.).....Capt., A.U.S.
Knight, R. A., Rockford (San Diego, Cal.).....Lt., U.S.N.R.
Mackie, D. G., Charles City (Topeka, Kan.)....1st Lt., A.U.S.
Miner, J. B., Jr., Charles City (San Francisco, Cal.) Lt., U.S.N.R.
Tolliver, H. A., Charles City (San Pedro, Cal.)....Capt., A.U.S.

Franklin County

Byers, W. L., Sheffield (Jefferson Barracks, Mo.).1st Lt., A.U.S.
Hedgecock, L. E., Hampton (care PM, San Francisco, Cal.) ....Lt., U.S.N.R.
Randall, W. L., Hampton (San Diego, Cal.).....Lt., U.S.N.R.
Walton, S. G., Hampton (Camp Robinson, Ark.) 1st Lt., A.U.S.

Fremont County

Kerr, W. H., Hamburg (Camp Phillips, Kan.)....Capt., A.U.S.
Marrs, W. D., Tabor (APO 846, New York, N. Y.) ....1st Lt., A U.S.
Wanamaker, A. R., Hamburg (Los Angeles, Cal.)..Capt., A.U.S.

Greene County

Cartwright, F. P., Grand Junction (Casper, Wyo.) Capt., A.U.S.
Castles, W. A., Jr., Rippey (APO San Francisco, Cal.) ....Capt. A.U.S.
Hanson, L. C., Jefferson (Camp Rucker, Ala.)...1st Lt., A.U.S.
Jongewaard, A. J., Jefferson (St. Louis, Mo.).....U.S.N.R.
Limberg, J. I., Jr., Jefferson (APO San Francisco, Cal.) ....Capt., A.U.S.
Lohr, P. E., Churdan (San Diego, Cal.).....A.U.S.

Grundy County

Rose, J. E., Grundy Center (Norman, Okla.) Lt. Comdr., U.S.N.R.

Hamilton County

Buxton, O. C., Webster City (March Field, Cal.)..1st Lt., A.U.S.
Howar, B. F., Jewell (APO 514, New York, N. Y.).Capt., A.U.S.
James, D. W., Kamrar (APO 3792, New York, N. Y.) ....Capt., A.U.S.
Lewis, W. B., Webster City (Camp Young, Cal.)..Capt., A.U.S.
Mooney, F. P. Jewell (APO New York, N. Y.)
Paschal, G. A., Williams (Camp Barkeley, Texas)..Capt., A.U.S.
Patterson, R. A., Webster City (San Diego, Cal.) ....Lt. Comdr., U.S.N.R.
Ptacek, J. L., Webster City (Sheppard Field, Texas)
Thompson, E. D., Webster City (Biloxi, Miss.)..Capt., A.U.S.

Hancock-Winnebago Counties

Dolmage, G. H., Buffalo Center (Camp Robinson, Ark.)...A.U.S.
Dulmes, A. H., Klemme (Camp Lewis, Wash.).....Capt., A.U.S.
Eller, L. W., Kanawha (APO 302, New York, N. Y.) ....1st. Lt., A.U.S
Shaw, D. F., Britt (Long Beach, Cal.)
Thomas, C. W., Forest City (Camp Crowder, Mo.)..Capt., A.U.S.

Hardin County

Houlihan, F. W., Ackley (APO 860, New York, N. Y.) ....1st. Lt., A.U.S.
Jansonius, J. W., Eldora (Fort Rosecrans, Cal.)....Capt., A.U.S.
Johnson, R. J., Iowa Falls (Fort Bliss, Texas)..Capt., A.U.S.
Johnson, W. A., Alden (Pendleton, Ore.)
Shurts, J. J., Eldora (Camp Roberts, Cal.).....1st Lt., A.U.S.
Todd, V. S., Eldora (Camp Barkeley, Texas).....1st Lt., A.U.S.

Harrison County

Bergstrom, A. C., Missouri Valley (Camp Robinson, Ark.)
Byrnes, C. W., Dunlap (Jefferson Barracks, Mo.)
Heise, C. A., Jr., Missouri Valley
Tamisiea, F. X., Missouri Valley (Jefferson Barracks, Mo.) ....1st Lt., A.U.S.

Henry County

Brown, W. B., Mount Pleasant (Ft. Devens, Mass.).Capt., A.U.S.
Cogan, Samuel, Mt. Pleasant.....A.U.S.
Dwankowski, Carl, Mt. Pleasant.....A.U.S.
Gloeckler, B. B., Mount Pleasant (Fort Myers, Fla.) Capt., A.U.S.
Hartley, B. D., Mount Pleasant (Yuma, Ariz.)....Capt., A.U.S.
Megorden, W. H., Mount Pleasant (Ogden, Utah) 1st Lt., A.U.S.
Ristine, L. P., Mount Pleasant (Sioux Falls, S. Dak.) ....Major, A.U.S.

Howard County

Buresh, Abner, Lime Springs (San Diego, Cal.)
Nierling, P. A., Cresco (Camp Polk, La.).....1st Lt., A.U.S.

Humboldt County

Arent, A. S., Humboldt (Stockton, Cal.).....1st Lt., A.U.S.
Coddington, J. H., Humboldt (Fresno, Cal.).....1st Lt., A.U.S.

Ida County

Dressler, J. B., Ida Grove (Texarkana, Tex.)....1st Lt., A.U.S.
Harris, H. H., Battle Creek (Omaha, Neb.)....1st Lt., A.U.S.
Martin, J. W., Holstein (Montgomery, Ala.).....Capt., A.U.S.

Iowa County

McDaniel, J. D., Marengo (Fort Clark, Texas).....A.U.S.
Miller, D. F., Williamsburg (Farragut, Idaho).....Lt., U.S.N.R.

Jackson County

Swift, F. J., Jr., Maquoketa (Fort Bragg, N. C.)..Major, A.U.S

Jasper County

Doake, Clarke, Newton.....1st Lt., A.U.S.
Minkel, R. M., Newton (APO New York, N. Y.) 1st Lt., A.U.S.
Ritchey, S. J., Newton.....Major, A.U.S.

Jefferson County

Castell, J. W., Fairfield (APO 1001, New York, N. Y.) ....Capt., A.U.S.
Gittler, Ludwig, Fairfield (APO 1001, New York, N. Y.) ....Major, A.U.S.
Graber H. E., Fairfield (Carlisle Barracks, Penn.) Major, A.U.S.
James, L. D., Fairfield (Camp Dodge, Iowa)....Lt. Col., A.U.S.
Taylor, I. C., Fairfield (Washington, D. C.)....1st Lt., A.U.S.

Johnson County

Agnew, J. W., Iowa City (Camp Phillips, Kan.)..1st Lt., A.U.S.
Allen, J. H., Iowa City (Scott Field, Ill.).....Capt., A.U.S.
Boiler, W. F., Iowa City (Fort Leonard Wood, Mo.) ....Major, A.U.S.
Boyd, E. J., Iowa City (Colorado Springs, Colo.).1st Lt., A.U.S.
Brinkhous, K. M., Iowa City (Fort Houston, Texas) Lt. Col., A.U.S.
Callahan, G. D., Iowa City (El Toro, Cal.).....Lt., U.S.N.R.
Cooper, W. K., Iowa City (Jefferson Barracks, Mo.) Capt., A.U.S.
Crowell, E. A., Iowa City (Spokane, Wash.)..1st Lt., A.U.S.
Diddle, A. W., Iowa City (Key West, Fla.)..Lt. (jg), U.S.N.R.
Dorner, R. A., Iowa City (APO New York, N. Y.).1st Lt., A.U.S.
Elmquist, H. S., Iowa City (Fleet PO, San Francisco, Cal.) ....Lt., U.S.N.R.
Emmons, M. B., Iowa City (Fort Sam Houston, Texas) ....1st Lt., A.U.S.
Flynn, J. E., Iowa City (Hot Springs, Ark.).....A.U.S.
Fourt, A. S., Iowa City (APO 1001, New York, N. Y.) ....Col., A.U.S.
Francis, N. L., Iowa City (Annapolis, Md.) Lt. (jg), U.S.N.R.
Galinsky, L. J., Oakdale (Camp Crowder, Mo.)....Capt., A.U.S.
Garlinghouse, R. O., Iowa City (Fort Snelling, Minn.)..A.U.S.
Hardin, R. C., Iowa City (APO 1001, New York, N. Y.)....A.U.S.
Hartung, Walter, Iowa City (Fort Des Moines, Iowa)..A.U.S.
Irwin, R. L., Iowa City (Iowa City, Iowa)..Lt. Comdr., U.S.N.R.
January, L. E., Iowa City (Davis-Monthan Field, Ariz.) ....1st Lt., A.U.S.
Keisler, H. D., Iowa City (Camp Barkeley, Tex.)..1st Lt., A.U.S.
Lage, R. H., Iowa City (Santa Barbara, Cal.).....Lt., U.S.N.R.
Longwell, F. H., Iowa City (APO 505, New York, N. Y.) ....Capt., A.U.S.
Nagyfy, S. F., Iowa City (Memphis, Tenn.)...Lt. (jg), U.S.N.R.
Newman, R. W., Iowa City (Fleet PO, New York, N. Y.) ....Lt., U.S.N.R.
Paulus, E. W., Iowa City (APO 1001, New York, N. Y.) ....Lt. Col., A.U.S.
Petersen, V. W., Iowa City (APO 1001, New York, N. Y.) ....Col., A.U.S.
Sells, R. L., Jr., Iowa City (Hamilton Field, Cal.).1st Lt., A.U.S.
Smith, H. F., Iowa City (Great Lakes, Ill.).Lt. Comdr., U.S.N.R.
Springer, E. W., Iowa City (APO 622, Miami, Fla.).1st Lt., A.U.S.
Stadler, H. E., Iowa City (Washington, D. C.)....1st Lt., A.U.S.
Staggs, W. A., Iowa City (Camp Robinson, Ark.)..1st Lt., A.U.S.
Stephens, R. L., Iowa City (Orlando, Fla.).....Capt., A.U.S.
Stump, R. B., Iowa City (Fort Leonard Wood, Mo.)..A.U.S.
Titus, E. L., Iowa City (Fort Wright, N. Y.)....Col., A.U.S.
Vest, W. M., Iowa City (Fort Ord, Cal.).....Capt., A.U.S.
Ziffren, S. E., Iowa City (Springfield, Mo.)....1st. Lt., A.U.S.

Junior Members

Adams, M. P., Iowa City
Ahrens, J. H., Iowa City (APO San Francisco, Cal.).....A.U.S.
Ball, A. L., Iowa City (Camp Polk, La.).....Major, A.U.S.
Barrent, M. E., Iowa City (Camp Tyson, Tenn.)..Capt., A.U.S.
Black, N. M., Iowa City (McChord Field, Wash.) 1st Lt., A.U.S.
Blair, J. D., Iowa City (APO San Francisco, Cal.).Major, A.U.S.
Boyd, R. J., Iowa City (Spokane, Wash.).....Capt., A.U.S.
Brintnall, E. S., Iowa City (Colorado Springs, Colo.) ....1st Lt., A.U.S.
Burr, S. P., Iowa City (APO San Francisco, Cal.).1st Lt., A.U.S.
Connole J. F., Iowa City (Camp Bowie, Texas)..1st Lt., A.U.S.
Couch, O. A., Iowa City (Camp Van Dorn, Miss.)..1st Lt., A.U.S.
Decker, C. E., Iowa City (Oklahoma City, Okla.)..1st Lt., A.U.S.
Donnelly B. A., Iowa City (APO San Francisco, Cal.) ....1st Lt., A.U.S.
Ehrenhaft, J. L., Iowa City (March Field, Cal.)..1st Lt., A.U.S.
Englerth, F. L., Iowa City (APO San Francisco, Cal.) ....Capt., A.U.S.

Freiberg, M., Iowa City (Jefferson Barracks, Mo.).....A.U.S.
Glassman A. L., Iowa City (Palm Springs, Cal.) 1st Lt., A.U.S.
Gilliland, C. H., Iowa City (Great Lakes, Ill.) Lt. (jg), U.S.N.R.
Hamilton, H. E., Iowa City (Chicago, Ill.).....1st Lt., A.U.S.
Harms, G. E., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Ide, L. W., Iowa City (Fort Warren, Wyo.).....1st Lt., A.U.S.
Jacobs, C. A., Iowa City (APO New York, N. Y.).Major, A.U.S.
Keil, P. G., Iowa City (Sioux City, Iowa).....1st Lt., A.U.S.
Kelberg, M. R., Iowa City (Treasure Island, Cal.) .....Lt. (jg), U.S.N.R
Keleher, M. F., Iowa City (Great Lakes, Ill.)..Lt. (jg), U.S.N.R.
Keohen, G. F., Iowa City (Camp Grant, Ill.)....Capt., A.U.S.
Kugler, F. E., Iowa City (Fort Warren, Wyo.)....Capt., A.U.S.
Lowry, F. C., Iowa City (Sioux Falls, S. D.)....1st Lt., A.U.S.
McCann, J. P., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
McQuiston, W. O., Iowa City (Chicago, Ill.)....1st Lt., A.U.S.
Moen, B. H., Iowa City
Moon, R. E., Iowa City (Camp Bowie, Texas)....1st Lt., A.U.S.
Phillips, R. M., Iowa City (San Francisco, Cal.) 1st Lt., A.U.S.
Pulliam, R. L., Iowa City (Portland, Ore.).....Capt., A.U.S.
Randall, C. G., Iowa City
Randall, R. G., Iowa City (Waterloo, Iowa).....Capt. A.U.S.
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.) .....1st Lt., A.U.S.
Russin, L. A., Iowa City (Fort Blanding, Fla.)....Capt., A.U.S.
Saar, J. L., Iowa City (APO New York, N. Y.)..Capt., A.U.S.
Sawtelle, W. W., Iowa City
Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Shand, J. A., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Shapiro, S. I., Iowa City
Simpson, F. E., Iowa City (Camp Grant, Ill.).....A.U.S.
Skewis, J. E., Iowa City (Rochester, N. Y.)..Lt. (jg), U.S.N.R.
Skouge, O. T., Iowa City
Towle, R. A., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Warren, R. F., Iowa City (Santa Barbara, Cal.).....A.U.S.
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.) .....1st, Lt., A.U.S.
Wicks, W. J., Iowa City (Camp Crowder, Mo.)....Capt., A.U.S.
Williams, L. A., Iowa City (Treasure Island, Cal.).1st Lt., A.U.S.
Willumsen, H. C., Iowa City (Chico, Cal.).....Capt., A.U.S.
Wolkin, J., Iowa City (San Antonio, Texas)....Capt., A.U.S.
Yetter, W. L., Iowa City (APO New York, N. Y.) Capt., A.U.S.
Zahrt, N. E., Iowa City (Miami Beach, Fla.)....1st Lt., A.U.S.
Zimmerman, H. A., Iowa City (Santa Ana, Cal.)..1st Lt., A.U.S.

Keokuk County

Bjork, Floyd, Keota (Camp Barkeley, Texas).....A.U.S.
Doyle, J. L., Sigourney (Camp Barkeley, Texas).....A.U.S.
Engelmann, A. T., What Cheer (Camp Polk, La.) Capt., A.U.S.
Graham, J. A., Gibson (Needles, Cal.).....1st. Lt., A.U.S.
Montgomery, G. E., Keota (Fort Sam Houston, Texas)....A.U.S.
Wiley, Dudley, Hedrick (Mason City, Wash.)

Kossuth County

Clapsaddle, D. W., Burt (Durham, N. C.).....1st Lt., A.U.S.
Williams. R. L., Lakota (San Diego, Cal.)..Lt. Comdr., U.S.N.R.

Lee County

Ashline, G. H., Keokuk (Indiantown Gap, Pa.)....Capt., A.U.S.
Cleary, H. G., Fort Madison (APO 980, Seattle, Wash.)
Cooper, R. E., Keokuk (Fort Leonard Wood, Mo.)
Johnstone, A. A., Keokuk (Camp Robinson, Ark.)
McKee, T. L., Keokuk (APO 922, San Francisco, Cal.) .....Major, A.U.S.
Pumphrey, L. C., Keokuk (Memphis, Tenn.).....Major, A.U.S.
Rankin, J. R., Keokuk (APO San Francisco, Cal.)
Steffey, F. L., Keokuk (Fort Snelling, Minn.)
Van Werden, B. D., Keokuk (Fort Jackson, S. C.)..Capt., A.U.S.

Linn County

Andre, G. R., Lisbon (Camp Barkeley, Texas)....Major, A.U.S.
Berney, P. W., Cedar Rapids (San Francisco, Cal.) Capt., A.U.S.
Chapman, R. M., Cedar Rapids (Chicago, Ill.)..1st Lt., A.U.S.
Coughlan, V. H., Cedar Rapids (Fort Snelling, Minn.)
Courter, W. O., Cedar Rapids (Fort Warren, Wyo.).Capt., A.U.S.
Crew, P. I., Marion (Monroe, La.).....Capt., A.U.S.
Dunn, F. C., Cedar Rapids (Pocatello, Idaho)....Capt., A.U.S.
Halpin, L. J., Cedar Rapids (Atlanta, Ga.)....Major, A.U.S.
Hecker J. T., Cedar Rapids (Pecos, Texas).....1st Lt., A.U.S.
Jirsa, H. O., Cedar Rapids (APO 813, New York, N. Y.) .....Capt., A.U.S.
Keith, J. J., Marion (APO 502, San Francisco, Cal.) .....Capt., A.U.S.
Kieck, E. G., Cedar Rapids (San Diego, Cal.) Lt. Comdr., U.S.N.R.
Kruckenberg, W. G., Mount Vernon (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Locher, R. C., Cedar Rapids (Brownsville, Texas)..Capt., A.U.S.
MacDougal, R. F., Cedar Rapids (Salina, Kan.)....Capt., A.U.S.
McConkie, E. B., Cedar Rapids (Sioux Falls, S. Dak.).....Major, A.U.S.
McQuiston, J. S., Cedar Rapids (Salina, Kan.)..Major, A.U.S.
Netolicky, R. Y., Cedar Rapids (San Francisco, Cal.) .Lt., U.S.N.R.
Noe, C. A., Cedar Rapids (Hot Springs, Ark.)..Major, A.U.S.
Parke, John, Cedar Rapids (APO 34, New York, N. Y.) .....Capt., A.U.S.
Proctor, R. D., Cedar Rapids (Corpus Christi, Texas) .....Lt. Comdr., U.S.N.R.
Redmond, J. J., Cedar Rapids (APO 1001, New York, N. Y.) .....Capt., A.U.S.
Rieniets, J. H., Cedar Rapids (Great Lakes, Ill.) .....Lt. Comdr., U.S.N.R.
Sedlacek, L. B., Cedar Rapids (Camp Shelby, Miss.) .....Lt. Col., A.U.S.
Smrha, J. A., Cedar Rapids (Camp Davis, N. C.)..1st Lt., A.U.S
Stark, C. H., Cedar Rapids (Pueblo, Colo.).....Capt., A.U.S
Sulek, A. E., Cedar Rapids (APO 960, San Francisco, Cal.) .....Major, A.U.S
Woodhouse, K. W., Cedar Rapids (APO 34, New York, N. Y.) .....Major, A.U.S
Wray, R. M., Cedar Rapids (APO 958, San Francisco, Cal.) .....Major, A.U.S.
Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R

Louisa County

DeYarman, K. T., Morning Sun (San Antonio, Texas) .....1st Lt., A.U.S
Tandy, R. W., Morning Sun (Norfolk, Va.)..Lt. Comdr., U.S.N.R.

Lucas County

Lister, K. E., Chariton (Fort Snelling, Minn.)

Lyon County

Cook, S. H., Rock Rapids (Memphis, Tenn.).....Capt., A.U.S.
‡Corcoran, T. E., Rock Rapids (APO New York) N. Y.) .....Capt. A.U.S
De Young, G. M., George (Camp Barkeley, Texas)..Capt., A.U.S
Moriarty, J. F., Rock Rapids (Fort Leonard Wood, Mo.) .....1st Lt., A.U.S

Madison County

Boden, H. N., Truro (Fresno, Cal.)
Chesnut, P. F., Winterset (Portland, Ore.).....1st Lt., A.U.S.
Wicks, R. F., Winterset (Portland, Ore.)
Veltman, J. F., Winterset (Ft. Leonard Wood, Mo.).Capt., A.U.S.

Mahaska County

Bennett, G. W., Oskaloosa (Fort Riley, Kan.)..Major, A.U.S.
Clark, G. H., Oskaloosa.....Lt. Comdr., U.S.N.R.
Greenlee, M. R., Oskaloosa (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Lemon, K.M., Oskaloosa.....1st Lt., A.U.S.
Zager, L. L., Oskaloosa (Camp Rucker, Ala.)....1st. Lt., A.U.S.

Marion County

Elliott, V. J., Knoxville (Portland, Ore.).....Capt., A.U.S.
Mater, D. W., Knoxville (Lincoln, Neb.).....Capt., A.U.S.
Ralston, F. P., Knoxville (Indio, Cal.).....Capt., A.U.S.
Schiek, C. M., Knoxville.....Lt. Comdr., U.S.N.R.
Schroeder, M. C., Pella (Camp Uhlan, Texas)....1st Lt., A.U.S.
Williams, D. B., Knoxville.....Capt. A.U.S.

Marshall County

Carpenter, R. C., Marshalltown (APO New York, N. Y.) .....Capt., A.U.S.
Marble, E. J., Marshalltown (San Diego, Cal.)....Lt., U.S.N.R.
Marble, W. P., Marshalltown (Walla Walla, Wash.) Capt., A.U.S.
Meyer, M. G., Marshalltown (Camp Polk, La.)....Capt., A.U.S.
Noonan, J. J., Marshalltown (San Diego, Cal.)..Major, A.U.S.
Phelps, R. E., State Center (Fort Cronkhite, Cal.) .....1st Lt., A.U.S.
Sinning, J. J., Melbourne (Camp Robinson, Ark.)..Capt., A.U.S.
Smith, E. M., State Center (Sioux City, Ia.).....Major, A.U.S.
Stegman, J. J., Marshalltown (Portland, Ore.)..Capt., A.U.S.
Wells, R. C., Marshalltown (Gowen Field, Idaho) 1st Lt., A.U.S.
Wolfe, O. D., Marshalltown (Fort Riley, Kan.)..Capt., A.U.S.
Wolfe, R. M., Marshalltown (Cherry Point, N. C.) .....Lt. (jg), U.S.N.R.

Mills County

Magaret, E. C., Glenwood (Lubbock, Texas)....1st Lt., A.U.S.
Shonka, T. E., Malvern (Baltimore, Md.).....1st Lt., A.U.S.

Mitchell County

Culbertson, R. A., St. Ansgar (Modesto, Cal.).....Major, A.U.S.
Moore, E. E. (Camp Pickett, Virginia).....Major, A.U.S.
Owen, William (San Diego, Cal.).....Lt. (jg), U.S.N.R.
Walker, T. G., Riceville (Minneapolis, Minn.).....Lt., U.S.N.R.

Monona County

Almer, L. E., Moorehead (Fort Knox, Ky.)
Ganzhorn, H. L., Mapleton (Carlisle Barracks, Pa.) .....1st. Lt., A.U.S.
Gaukel, L. A., Onawa (APO 937, Seattle, Wash.)..1st Lt., A.U.S.
†Harlan, M. E., Onawa (care PM, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Stauch, M. O., Whiting (Fort Rosecrans, Cal.).....A.U.S.
Wainwright, M. T., Mapleton (APO 939, Seattle, Wash.)..A.U.S.
Wolpert, P. L., Onawa (Rochester, Minn.).....1st Lt., A.U.S.

Monroe County

Heimann, V. R. C., Monroe (Camp Maxey, Texas)..Capt., A.U.S.
Richter, H. A., Albia (Waco, Texas).....Capt., A.U.S.
Smith, R. A., Albia (San Antonio, Texas).....1st Lt., A.U.S.

Montgomery County

Bastron, H. C., Red Oak (APO 525, New York, N. Y.) .....Major, A.U.S.
Hansen, F. A., Red Oak (San Diego, Cal.).....Lt., U.S.N.R.
Moriarty, L. R., Villisca (APO 944, Seattle, Wash.).Capt., A.U.S.
Sorensen, E. M., Red Oak (Jefferson Barracks, Mo.) .....1st. Lt., A.U.S.

Muscatine County

Ady, A. E., West Liberty (care PM, San Francisco, Cal.)U.S.N.R.
Asthalter, R. W., Muscatine (Fort Meade, Md.)..1st Lt., A.U.S.
Carlson, E. H., Muscatine (Kalamazoo, Mich.)....Capt., A.U.S.
Goad, R. R., Muscatine (Washington, D. C.) Lt. Comdr., U.S.N.R.
Kimball, J. E., Jr., West Liberty (APO Miami, Fla.)
Lindley, E. L., Muscatine (APO Los Angeles, Cal.).Capt., A.U.S.
Muhs, E. O., Muscatine (Camp Claiborne, La.).....Capt., A.U.S.
Norem, Walter, Muscatine (APO Miami, Fla.)....Capt., A.U.S.

Robertson, T. A., West Liberty (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Sywassink, G. A., Muscatine (Camp Campbell, Ky.) Major, A.U.S.
Whitmer, L. H., Wilton Junction (Fort Sill, Okla.) Major, A.U.S.

O'Brien County

Getty, E. B., Primghar (Camp Robinson, Ark.) 1st Lt., A.U.S.
Hayne, W. W., Paullina (APO New York, N. Y.) 1st Lt., A.U.S.
Moen, S. T., Hartley (APO 3492, New York, N. Y.) Major, A.U.S.
Myers, K. W., Sheldon (Watertown, S. Dak.) 1st Lt., A.U.S.

Osceola County

Kuntz, G. S., Sibley (APO 34, New York, N. Y.)

Page County

Barnes, C. A., Shenandoah (Fort Bragg, N. C.) Capt., A.U.S.
Blackman, Nathan, Shenandoah ..... Capt., A.U.S
Bossingham, E. N., Clarinda (APO 923, San Francisco, Cal.) ..... Capt., A.U.S.
Bunch, H. Mck., Shenandoah (Farragut, Idaho) ..... Lt. Comdr., U.S.N.R.
‡Burdick, F. D., Shenandoah (APO, New York, N. Y.) ..... Capt., A.U.S.
Burnett, F. K., Clarinda (Camp Carson, Colo.) Major, A.U.S.
Little, E. B., Shenandoah ..... 1st Lt., A.U.S.
Rausch, G. R., Clarinda (Wendover Field, Utah) 1st Lt., A.U.S.
Savage, L. W., Shenandoah (Fort Meade, Md.) 1st Lt., A.U.S

Palo Alto County

Davey, W. P., Emmetsburg (San Diego, Cal.) Lt. (jg), U.S.N.R.

Plymouth County

Bowers, C. V., LeMars (Carlisle Barrack, Pa.) 1st Lt., A.U.S.
Foss, R. H., Remsen (Salt Lake City, Utah) 1st Lt., A.U.S.
Wolfson, Harold (Fort Lewis, Wash.) ..... Capt., A.U.S.

Pocahontas County

Blair, F. L., Jr., Fonda ..... 1st Lt., A.U.S.
Herrick, T. G., Gilmore City (Camp Hale, Colo.) Capt., A.U.S.
Larson, J. B., Laurens (Camp Chaffee, Ark.) 1st Lt., A.U.S.
Leserman, L. K., Rolfe (Camp Polk, La.) ..... 1st Lt., A.U.S.

Polk County

Abbott, W. D., Des Moines (Oakland, Cal.) Lt. Comdr., U.S.N.R.
Anderson, N. B., Des Moines (APO 668, New York, N. Y.) ..... Lt. Col., A.U.S.
Angell, C. A., Des Moines (Camp Maxey, Texas) Capt., A.U.S.
Anspach, R. S., Mitchellville (APO 762, New York, N. Y.) ..... Lt. Col., A.U.S.
Barner, J. L., Des Moines (Atlanta, Ga.) Major, A.U.S.
Barnes, B. C., Des Moines (Ogden, Utah) Capt., A.U.S.
Bates, M. T., Des Moines (Fleet PO, New York, N. Y.) ..... Lt. Comdr., U.S.N.R.
Bender, H. R., Des Moines (Carlisle Barracks, Penn) ..... 1st Lt., A.U.S.
Bond, T. A., Des Moines (Rochester, Minn.) Lt. (jg), U.S.N.R.
Bone, H. C., Des Moines (Arlington, Cal.) ..... Capt., A.U.S.
Brown, A. W., Des Moines (Fort Leavenworth, Kan.) ..... Capt., A.U.S.
Bruner, J. M., Des Moines (Fort Bliss, Texas) Major, A.U.S.
Bruns, P. D., Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
‡Burgeson, F. M., Des Moines (APO 1001, New York, N. Y.) ..... Capt., A.U.S.
Caldwell, J. W., Des Moines (Vulcan, Alberta, Canada) ..... Flight Lt., R.C.A.F.
Chambers, J. W., Des Moines (Fort Riley, Kan.) 1st Lt., A.U.S.
Chase, W. B., Jr., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Clark, G. E., Jr., Des Moines (Randolph Field, Texas) ..... 1st Lt., A.U.S.
Connell, J. R., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Corn, H. H., Des Moines (St. Louis, Mo.) ..... 1st Lt., A.U.S.
Coughlan, D. W., Des Moines (Camp Gruber, Okla.) Capt., A.U.S.
Crowley, D. F., Jr., Des Moines (APO New York, N. Y.) ..... Capt., A.U.S.
Crowley, F. A., Des Moines (APO New York, N. Y.) ..... 1st Lt., A.U.S.
DeCicco, Ralph, Des Moines (APO Los Angeles, Cal.) ..... Capt., A.U.S.
Decker, H. G., Des Moines (Long Beach, Cal.) Lt., U.S.N.R.
Downing, A. H., Des Moines (Fort Snelling, Minn.) ..... 1st Lt., A.U.S.
Dushkin, M. A., Des Moines (Fort Huachuca, Ariz.) ..... Capt., A.U.S.
Elliott, O. A., Des Moines (Pecos, Texas) ..... 1st Lt., A.U.S.
Ellis, H. G., Des Moines (Casper, Wyo.) ..... 1st Lt., A.U.S.
Ervin, L. J., Des Moines (Fort Clark, Texas) Major, A.U.S.
Fried, David, Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Fracasse, John, Des Moines ..... 1st Lt., A.U.S.
George, E. M., Des Moines (Camp Dodge, Iowa) ..... Lt. Comdr., U.S.N.R.
Gerchek, E. W., Des Moines
Goldberg, Louie, Des Moines (Randolph Field, Texas) ..... 1st Lt., A.U.S.
Gordon, A. M., Des Moines (Fort Ord, Cal.) Capt., A.U.S.
Graeber, F. O., Des Moines (Aberdeen, S. Dak.) 1st Lt., A.U.S.
Greek, L. M., Des Moines (Camp Crowder, Mo.) 1st Lt., A.U.S.
Gurau, H. H., Des Moines (Portland, Ore.) 1st Lt., A.U.S.
Haines, D. J., Des Moines (Denver, Colo.) 1st Lt., A.U.S.
Harris, D. D., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Harris, H. L., Des Moines ..... 1st Lt., A.U.S.
Hess, John, Jr., Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
James, A D., Des Moines (Fleet PO, San Francisco, Cal.) ..... Comdr., U.S.N.R.
Johnston, C. H., Des Moines (APO 639, New York, N. Y.) ..... Lt. Col., A.U.S.
Kast, D. H., Des Moines (Fort Stevens, Ore.) ..... Capt., A.U.S.
Kelley, E. J., Des Moines (Piedmont, Cal.) Lt. Comdr., U.S.N.R.
Kelly, D. H., Des Moines (Denver, Colo.) ..... Lt. Col., A.U.S.
Klocksiem, H. L., Des Moines ..... Lt. (jg), U.S.N.R.
Kottke, E. E., Des Moines (Temple, Texas) ..... Capt., A.U.S.
Landis, S. N., Des Moines (West Palm Beach, Fla.) ..... 1st Lt., A.U.S.
La Tona, Salvatore, Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Lederman, James, Des Moines ..... 1st Lt., R.C.A.
Lehman, E. W., Des Moines (Memphis, Tenn.) Major, A.U.S.
Lovejoy, E. P., Des Moines (Mare Island, Cal.) ..... Lt. Comdr., U.S.N.R.
Maloney, P. J., Des Moines (Fort Lewis, Wash.) 1st Lt., A.U.S.
Marquis, G. S., Des Moines (Chicago, Ill.) Lt. Comdr., U.S.N.R.
Martin, L. E., Des Moines (Helena, Ark.) ..... 1st Lt., A.U.S.
Mauritz, E. L., Des Moines (APO 668, New York, N. Y.) ..... 1st Lt., A.U.S.
McCoy, H. J., Des Moines (Iowa City, Iowa) Comdr., U.S.N.R.
McDonald, D. J., Des Moines (March Field, Cal.) Capt., A.U.S.
McNamee, J. H., Des Moines (Seattle, Wash.) ..... Lt. Comdr., U.S.N.R.
Mencher, E. W., Des Moines ..... 1st Lt., A.U.S.
Merkel, B. M., Des Moines (Tullahoma, Tenn.) Major, A.U.S.
Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.) ..... Capt., A.U.S.
Morden, R. P., Des Moines (Edgewood Arsenal, Md.) ..... 1st Lt., A.U.S.
Murphy, J. H., Des Moines (San Diego, Cal.) Lt., U.S.N.R.
Nelson, A. L., Des Moines (Camp Livingston, La.) Capt., A.U.S.
Noun, L. J., Des Moines (Balboa, Panama Canal Zone) ..... Lt. (jg), U.S.N.R.
Noun, M. H., Des Moines (APO 871, New York, N. Y.) ..... Major, A.U.S.
Nourse, M. H., Des Moines (Bethesda, Md.) Lt. (jg), U.S.N.R.
Patton, B. W., Des Moines (Camp Robinson, Ark.) ..... 1st Lt., A.U.S.
Pearlman, L. R., Des Moines (APO Seattle, Wash.) ..... 1st Lt., A.U.S.
Peisen, C. J., Des Moines (Camp Perry, Ohio) 1st Lt., A.U.S.
Penn, E. C., West Des Moines (Spokane, Wash.) ..... 1st Lt., A.U.S.
Pfeiffer, E. P., Des Moines (Springfield, Mo.) Capt., A.U.S.
Phillips, A. B., Des Moines (Corpus Christi, Texas) ..... Lt., U.S.N.R.
Porter, R. J., Des Moines (Orlando, Fla.) ..... 1st Lt., A.U.S.
Powell, L. D., Des Moines (Long Beach, Cal.) Comdr., U.S.N.R.
Pratt, E. B., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Priestley, J. B., Des Moines (Camp Phillips, Kan.) Major, A.U.S.
Purdy, W. O., Des Moines (Camp Howze, Texas) Capt., A.U.S.
Riegelman, R. H., Des Moines (APO 634, New York, N. Y.) ..... Major, A.U.S.
Robinson, V. C., Des Moines (Tampa, Fla.) Capt., A.U.S.
Rotkow, M. J., Des Moines (Louisville, Ky.) 1st Lt., A.U.S.
Schaeferle, M. J., Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Schlaser, V. L., Des Moines (Bethesda, Md.) ..... Lt. U.S.N.R.
Shepherd, L. K., Des Moines (APO New York, N. Y.) ..... 1st Lt., A.U.S.
Shifler, H. K., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Singer, P. L., Des Moines (Camp Grant, Ill.) 1st Lt., A.U.S.
Skultety, J. A., Des Moines (Brownsville, Texas) ..... 1st. Lt., U.S.P.H.S.
Smead, H. H., Des Moines (Bangor, Me.) ..... Capt., A.U.S.
Smith, H J., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Smith, R. T., Des Moines (Meridian, Miss.) 1st Lt., A.U.S.
Snodgrass, R. W., Des Moines (Fort Rosecrans, Cal.) ..... Capt., A.U.S.
Snyder, G. E., Grimes (Camp Robinson, Ark.) ..... Major, A.U.S.
Sohm, H. A., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Sorensen, R. M., Des Moines (Topeka, Kan.) Major, U.S.P.H.S.
Springer, F. A., Des Moines (Treasure Island, Cal.) ..... Lt. Comdr., U.S.N.R.
Stearns, A. B., Des Moines (Denver, Colo.) Major, A.U.S.
Stickler, Robert, Des Moines (Fort Benning, Ga.) 1st. Lt., A.U.S.
Stitt. P. L., Des Moines (Seattle, Wash.) Lt. (jg), U.S.N.R.
Throckmorton, J. F., Des Moines (Camp Howze, Texas) ..... Capt. A.U.S.
Toubes, A. A., Des Moines (Greenville, Miss.) 1st Lt., A.U.S.
Turner, H. V., Des Moines (Hot Springs, Ark.) 1st Lt., A.U.S.
Updegraff, Thomas, Des Moines (Spokane, Wash.) 1st Lt., A.U.S.
Van Hale, L. A., Des Moines (Butler, Penn.) 1st Lt., A.U.S.
Vaubel, E. K., Des Moines (Portland, Ore.) ..... Capt., A.U.S.
Wagner, E. C., Des Moines (Washington, D. C.) 1st Lt., A.U.S.
Willett, W. M., Des Moines (Fort Bragg, N. C.) 1st Lt., A.U.S.
Wirtz, D. C., Des Moines (Great Lakes, Ill.) Lt. Comdr., U.S.N.R.
Zarchy, A. C., Des Moines (Camp Cook, Cal.) ..... Capt., A.U.S.

Pottawattamie County

Beaumont, F. H., Council Bluffs (APO 34, New York, N. Y.) ..... Major, A.U.S.
Cogley, J. P., Council Bluffs (APO Los Angeles, Cal.) ..... Capt., A.U.S.
Collins, R. M., Council Bluffs (San Diego, Cal.) Lt., U.S.N.R.
Dean, A. M., Council Bluffs (Pensacola, Fla.) ..... Lt. Comdr., U.S.N.R.
Hennessy, J. D., Council Bluffs (Chicago, Ill.) Lt., U.S.N.R.
Jensen, A. L., Council Bluffs (APO 1104, San Francisco, Cal.) ..... Lt. Col., A.U.S.
Klok, G. J., Council Bluffs (Athol, Idaho) Lt. (jg), U.S.N.R.
Kurth, C. J., Council Bluffs (Camp Crowder, Mo.) 1st Lt., A.U.S.
Limbert, E. M., Council Bluffs (Camp Carson, Colo.) ..... Capt. A.U.S.
Maiden, S. D., Council Bluffs (San Francisco Cal.) ..... Major, A.U.S.

Martin, L. R., Council Bluffs (Camp Rucker, Ala)..Capt., A.U.S.
Moskovitz, J. M., Council Bluffs (Camp Lockett Cal.) .....Capt., A.U.S.
Sternbill, Isaac, Council Bluffs (APO 3552, Seattle, Wash.) .....Capt., A.U.S.
Tinley, R. E., Council Bluffs (APO New York, N. Y.) .....Capt., A.U.S.
Treynor, J. V., Council Bluffs (South Bend, Ind.) .....Lt. Comdr., U.S.N.R.
Wieseler, R. J., Avoca (McChord Field, Wash.).....A.U.S.
Wurl, O. A., Council Bluffs (APO 871, New York, N. Y.) .....Capt., A.U.S.

Poweshiek County

Brobyn, T. E., Grinnell (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.
Hickerson, L. C., Brooklyn (Oxnard, Cal.).....1st. Lt., A.U.S.
Korfmacher, E. S., Grinnell (San Francisco, Cal.) .....Capt., A.U.S.
Niemann, T. V., Brooklyn (Camp Shelby, Miss.) .....1st Lt., A.U.S.
Parish, J. R., Grinnell (Treasure Island, Cal.) .....Lt. Comdr., U.S.N.R.

Ringgold County

Seaman, C. L., Mount Ayr (Van Buren, Ark.)..Capt., A.U.S.

Sac County

Bassett, G. H., Sac City (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
Deters, D. C., Schaller (APO 1001, New York, N. Y.) .....Capt., A.U.S.
Evans, W. I., Sac City (Camp Hood, Texas)..1st Lt., A.U.S.
Klocksiem, R. G., Odebolt (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Neu, H. N., Sac City (Portland, Ore.).....Major, A.U.S.

Scott County

Baker, R. W., Davenport (Rock Island, Ill.)..1st Lt., A.U.S.
Balzer, W. J., Davenport (APO Seattle, Wash.)..1st Lt., A.U.S.
Block, L. A., Davenport (APO New York, N. Y.)..Major, A.U.S.
Bishop, J. F., Davenport (APO 972, Seattle, Wash.) .....1st Lt., A.U.S.
Boden, W. C., Davenport (APO 3760, New York, N. Y.) .....Capt., A.U.S.
Brown, D. H., Davenport (Carlisle Barracks, Pa.)..Capt., A.U.S.
Brown, M. J., Davenport (Camp Hale, Colo.).....Capt., A.U.S.
Carey, E. T., Davenport (Fort Devens, Mass.)..1st Lt., A.U.S.
Christiansen, C. C., Dixon (APO 1104, San Francisco, Cal.) .....1st Lt., A.U.S.
Cummins, G. M., Jr., Davenport.....1st Lt., A.U.S.
Decker, C. E., Davenport (Oklahoma City, Okla.) .....1st Lt., A.U.S.
Evans, H. J., Davenport (Colorado Springs, Colo.).Capt., A.U.S.
Gibson, P. E., Davenport (Palm Springs, Cal.).....Capt., A.U.S.
Hurevitz, H. M., Davenport (APO New York, N. Y.).Capt., A.U.S.
Hurteau, Everett, Davenport (APO New York, N. Y.) .....1st Lt., A.U.S.
Hurteau, W. W., Davenport (Camp Barkeley, Texas) .....Major, A.U.S.
Kimberly, L. W., Davenport (New Orleans, La.).Capt., A.U.S.
Krakauer, Max, Davenport (Fort Hayes, Ohio)....1st Lt., A.U.S.
LaDage, L. H., Davenport (Camp Campbell, Ky.)..Capt., A.U.S.
Lorfeld, G. W., Davenport (Fort Myers, Fla.)....Capt., A.U.S.
Marker, J. I., Davenport (Camp Carson, Colo.)..Col., A.U.S.
McMeans, T. W., Davenport (APO New York, N. Y.) .....1st Lt., A.U.S.
Neufeld, R. J., Davenport (Rock Island, Ill.)..1st Lt., A.U.S.
Sheeler, I. H., Davenport (Omaha, Neb.).....1st Lt., A.U.S.
Smazal, S. F., Davenport (Pando, Colo.).....1st Lt., A.U.S.
Sorenson, A. C., Davenport (Oakland, Cal.)..Lt. Comdr., U.S.N.R.
Sunderbruch, J. H., Davenport (Paris, Texas)....1st Lt., A.U.S.
Weinberg, H. B., Davenport (Fort Benning, Ga.)..Major, A.U.S.
Zukerman, C. M., Bettendorf (Camp Carson, Colo.).Capt., A.U.S.

Shelby County

Bisgard, C. V., Harlan (Farragut Air Base, Idaho) .....Lt. Comdr., U.S.N.R.
Griffith, W. O., Shelby.....A.U.S.
McGowan, J. P., Harlan (San Diego, Cal.)..Lt. Comdr., U.S.N.R.

Sioux County

Gleysteen, R. R., Alton (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Grossmann, E. B., Orange City (Fort Sam Houston, Texas) .....1st Lt., A.U.S.
Larsen, M. O., Hawarden (Camp Bowie, Texas)..Major, A.U.S.

Story County

Conner, J. D., Nevada (Camp Robinson, Ark.)....1st Lt., A.U.S.
Fellows, J. G., Ames (Carlisle Barracks, Penn.).Capt., A.U.S.
Lekwa, A. H., Story City (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
McFarland, G. E., Jr., Ames (San Pedro, Cal.)....Lt., U.S.N.R.
McFarland, J. E., Ames (Farragut, Idaho)..Lt. Comdr., U.S.N.R.
Rosebrook, L. E., Ames (Randolph Field, Texas).1st Lt., A.U.S.
Sperow, W. B., Nevada (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
Thorburn, O. L., Ames (Las Vegas, Nevada)..Major, A.U.S.

Tama County

Boller, G. C., Traer (Camp Bowie, Texas)
Dobias, S. G., Chelsea (APO 937, Seattle, Washington)
Havlik, A. J., Tama (Fleet PO, San Francisco, Cal.).Lt., U.S.N.R.
Schaeferle, L. G., Gladbrook (Fort Leonard Wood, Mo.)
Standefer, J. M., Tama (San Diego, Cal.)

Taylor County

Hardin, J. F., Bedford (Fort Leonard Wood, Mo.)

Union County

Paragas, M. R., Creston (Avon Park, Fla.).....Capt., A.U.S.
Ryan, C. J., Creston (Scribner, Neb.).....1st Lt., A.U.S.

Wapello County

Brentan, Emanuel, Ottumwa (APO 252, New York, N. Y.) .....1st Lt., A.U.S.
Brody, Sidney, Ottumwa (APO New York, N. Y.)..Major, A.U.S.
Gilfillan, C. D. N., Eldon (Battle Creek, Mich.)....1st Lt., A.U.S.
Hughes, R. O., Ottumwa (Coronado, Cal.)..Lt. Comdr., U.S.N.R.
Moore, G. C., Ottumwa (Carlisle Barracks, Pa.)....1st Lt., A.U.S.
Nelson, F. L., Jr., Ottumwa (Camp Gruber, Okla.)..Capt., A.U.S.
Prewitt, L. H., Ottumwa (March Field, Cal.).....Major, A.U.S.
Selman, R. J., Ottumwa (El Paso, Texas).....Lt. Col., A.U.S.
Struble, G. C., Ottumwa (Fort Harrison, Ind.)....Lt. Col., A.U.S.
Whitehouse, W. N., Ottumwa (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Worley, C. L., Ottumwa (Camp Shelby, Miss.)....Capt., A.U.S.

Warren County

Fullgrabe E. A., Indianola (Bethesda, Md.) Lt. (jg), U.S.N.R.
Hoffman, G. R., Lacona (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.
Shaw, E. E., Indianola (Ancon, Canal Zone).....Capt., A.U.S.
Trueblood, C. A., Indianola (Camp Campbell, Ky.) 1st Lt., A.U.S.

Washington County

Boice, C. L., Washington (Pensacola, Wash.) Lt. (jg), U.S.N.R.
Droz, A. K., Washington (Grosse Ile, Mich.).Lt. Comdr., U.S.N.R.
Mast, T. M., Washington (Portland, Ore.).....Lt. U.S.N.R.
Stutsman, R. E., Washington (Pensacola, Fla.)....Lt., U.S.N.R.
Ware, S. C., Kalona (Fort Meade, Md.).....1st Lt., A.U.S.

Wayne County

Hyatt, C. N., Jr., Humeston (Indio, Cal.).....Capt., A.U.S.

Webster County

Baker, C. J., Fort Dodge (APO New York, N. Y.)...Capt., A.U.S.
Burch, E. S., Dayton (Camp Livingston, La.).....Capt., A.U.S.
Burleson, M. W., Fort Dodge (Vancouver, Wash.,..1st Lt., A.U.S.
Coughlan, C. H., Fort Dodge (Jefferson Barracks, Mo.) .....Major, A.U.S.
Dawson, E. B., Fort Dodge (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Glesne, O. N., Ft. Dodge (Great Lakes, Ill.)..Lt. Comdr., U.S.N.R.
Joyner, N. M., Fort Dodge (Brooklyn Field, Ala.)
Kluever, H. C., Fort Dodge (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Larsen, H. T., Fort Dodge (Baltimore, Md.)...Lt. (jg), U.S.N.R.
Shrader, J. C., Fort Dodge (APO 460, Los Angeles, Cal.) .....Major, A.U.S.
Thatcher, O. D., Fort Dodge (Tampa, Fla.).....1st Lt., A.U.S.
Thatcher, W. C., Fort Dodge (Fort Meade, Md.)....Capt., A.U.S.
Van Patten, E. M., Ft. Dodge (Alamogordo, N. M.).1st Lt., A.U.S.

Winneshiek County

Fritchen, A. F., Decorah (APO San Francisco, Cal.) .....Comdr., U.S.N.R.
Hospodarsky, L. J., Ridgeway (Seattle, Wash.)..Capt., A.U.S.
Larson, L. E., Decorah (Farragut, Idaho).....Lt., U.S.N.R.
Svendsen, R. N., Decorah (San Diego, Calif.)..Lt. (jg) U.S.N.R.
Van Besien, G. J., Decorah (Fort Leavenworth, Kan.) .....1st Lt., A.U.S.

Woodbury County

Bettler, P. L., Sioux City (APO San Francisco, Cal.) .....Major, A.U.S.
Blackstone, M. A., Sioux City (Pittsburg, Cal.).1st Lt., A.U.S.
Boe, Henry, Sioux City (Salina, Kan.).....Capt., A.U.S.
Burroughs, H. H., Sioux City.....Lt. (jg), U.S.N.R.
*Cmeyla, P. M., Sioux City (APO San Francisco, Cal.) .....Capt., A.U.S.
Cowan, J. A., Sioux City (Oklahoma City, Okla.) .....Major, U.S.P.H.S.
Crowder, R. E., Sioux City (San Diego, Cal.).Lt. Comdr., U.S.N.R.
Dimsdale, L. J., Sioux City (Camp Claiborne, La.).1st Lt., A.U.S.
Down, H. I., Sioux City (Camp Breckenridge, Ky.) Major, A.U.S.
Elson, V. J., Danbury (APO 702, Seattle Wash.)....Capt., A.U.S.
Frank, L. J., Sioux City (Mare Island, Cal.).Lt. Comdr., U.S.N.R.
Graham, J. W., Sioux City (San Diego, Cal.).Lt. Comdr., U.S.N.R.
Grossman, Milton, Sioux City (Hobbs, N. M.)..Capt., A.U.S.
Heffernan, C. E., Sioux City (Salt Lake City, Utah) .....1st Lt., A.U..S
Hicks, W. K., Sioux City (Fort Riley, Kan.)..Major, A.U.S.
Honke, E. M., Sioux City (Palm Springs, Cal.)..Capt., A.U.S.
Kaplan, David, Sioux City (Fort Bragg, N. C.)..1st Lt., A.U.S.
Knott, R. C., Sioux City (New York, N. Y.)....Capt., A.U.S.
Krigsten, W. M., Sioux City (Springfield, Mo.)..Lt. Col., A.U.S.
Lande, J. N., Sioux City (El Paso, Texas).....Major, A.U.S.
Martin, R. F., Sioux City (Camp Atterbury, Ind.).1st Lt., A.U.S.
Mattice, L. H., Danbury (Fort Lewis, Wash.).....1st Lt., A.U.S.
McCuistion, H. M., Sioux City (APO New York, N. Y.) .....Capt., A.U.S.
Mugan, R. C., Sioux City (Gowen Field, Idaho)..1st Lt., A.U.S.
Osincup, P. W., Sioux City (Edgewood Arsenal, Md.) .....1st Lt., A.U.S.
Rarick, I. H., Sioux City (Soquel, Cal.).....1st Lt., A.U.S.
Reeder, J. E., Jr., Sioux City (Modesto, Cal.)....Capt., A.U.S.
Ryan, M. J., Sioux City (Topeka, Kan.).....Capt., A.U.S.
Schwartz, J. W., Sioux City (Camp Crowder, Mo.).Major, A.U.S.
Tracy, J. S., Sioux City (Ephrata, Wash.).....Capt., A.U.S.
Wilson, L. L., Sioux City (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.

Worth County

Westly, G. S., Manly (Ft. Leonard Wood, Mo.)..Major, A.U.S.

Wright County

Aageson, C. A., Dows
Bird, R. G., Clarion (San Diego, Cal.).....Lt. Comdr., U.S.N.R.
Doles, E. A., Clarion (Phoenix, Ariz.)
Leinbach, S. P., Belmond (Farragut Air Base, Idaho)
Missildine, W. H., Eagle Grove (APO 25, San Francisco, Cal.) .....Capt., A.U.S.

(*) Reported missing in action.
(†) Reported killed in action.
(‡) Reported prisoner of war.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. F. W. MULSOW, Cedar Rapids
President-Elect—MRS. W. S. REILEY, Red Oak
Secretary—MRS. A. G. FELTER, Van Meter
Treasurer—MRS. A. E. MERKEL, Des Moines

HOME NURSING REPORT FROM POLK COUNTY

Home Nursing is occasionally interpreted as a personal dividend which an individual may receive from the Red Cross. This is true, yet the larger aspect, which is not recognized, is the strengthening of the nation through fortification of the health information of the individual family unit.

The goal for this year, July 1942 to July 1943, is one million women trained in Home Nursing. Iowa has reason to be proud of its record, since it stands highest of all seventeen states in the midwestern area. On the basis of the quota assigned, Iowa had completed 82 per cent as of March 24. In Polk county a quota of 1,445 certificates was established, and on that same date 1,663 certificates had been issued. Much of the credit for this record belongs to the Iowa State Department of Health and the quality of leadership it has given this program. Twenty institutes for instructors were given in various sections of the state and all of the sixty-five district and staff nurses attached to the State Department have supported and promoted these classes. Excellent films prepared by the State Department are available to every class and unusually fine recordings have recently been added to their loan facilities.

Last year we in Polk county were fortunate to have a large group of nurse-instructors available, but as demands on the profession have increased many of our inactive nurses have returned to duty and, consequently, are not free to participate in our program. On the other hand, with experience and continual improvement in teaching technics and selection of material, we find the quality of the program itself is of much higher and more satisfactory content.

Home nursing is concerned with two fields, the first—and more dramatic—is the care of the sick, with the demonstration and practice of nursing procedures, the second—and probably more important—is hygiene, or the creation of conditions which prevent the occurrence of sickness. In this field we were particularly fortunate to be able to present, in one meeting for all class members, the splendid film on immunizations which was prepared under the direction of the American Academy of Pediatrics.

While many of the results of an educational program are intangible, there are frequently very definite consequences which give lasting satisfaction to those loyal nurses who make the program possible through their contribution of time, energy and skill. We know of the husband of one class member who said, "Home Nursing made over bed-making at our house, and if she gets nothing more out of her twenty-four hours the course has been a success." With two local incidence of mumps and scarlet fever, our class members have taken pride in the absence of cross infections in their families. Our instructors are gratified when physicians comment on how much time they are saved when the patient's attendant has had a Home Nursing course. Such instructions as "isolation," "throat irrigation," and "hot compress" are quickly given and understood with no precious medical time out for detailed description of the procedure.

The nine Health Committees, seven of which include what is called Community Loan Closets, were organized in Polk County's rural districts and were a direct result of the Home Nursing program. These groups must not be left out of the picture since they have proved a real asset in emergencies and in caring for the underprivileged individuals in their community.

Home Nursing is called a "morale building" service, and surely it is worthy when we hear of cases in which no physician was available for many hours, but the strength of health information gleaned from Home Nursing helped the family follow telephone instructions and keep careful recordings, so that in place of hopeless panic, a quiet, constructive, purposeful routine carried on.

Mrs. Arthur H. Keyes, Chairman Home Nursing,
Polk County Chapter, American Red Cross.

DUBUQUE COUNTY

The Woman's Auxiliary to the Dubuque County Medical Society held a luncheon meeting at the Hotel Julien in Dubuque on Tuesday, March 9, at one o'clock, honoring the State President, Mrs. Frederick W. Mulsow. The Auxiliary dispensed with flowers for table decoration and voted instead that a contribution be sent to the Red Cross. Following the luncheon, Mrs. Henry M. Pahlas presided over the business meeting.

Due to the war the projects for the year have been Red Cross and Home Defense. The following items were completed for the Red Cross by the

Auxiliary: 26 men's shirts, 85 pants, 4 pajamas, 4 scarves, 8 sweaters, 60 kit bags, 31 rompers, 5 operating gowns, 27 slips, 16 bed jackets, 334 utility bags, 6 bathrobes, 30 hospital gowns, 12 nightgowns, 2 pairs of gloves, 10 pairs of wristlets, 2 shawls and caps for the surgical dressing room. One member gave twenty hours of work at the Red Cross work room. Two members gave full time at the Red Cross surgical dressing room, as chairman and assistant, and another gave three-fourths time.

Our members devoted 371 hours of work to the Home Defense project, sewing and mending at Mercy Hospital. One of our members has just completed the Red Cross Nutrition class and her Nurses Aide hours.

This year we report twenty-five subscriptions to *Hygeia*. We placed the magazine in the hospitals and the Boys' Club.

The following officers were elected for the ensuing year: president, Mrs. Henry M. Pahlas; vice president, Mrs. John C. Pickard; secretary and treasurer, Mrs. Clarence A. Darrow; assistant secretary and treasurer, Mrs. Frederick Fuerste; and historian, Mrs. William A. Henneger. All officers are of Dubuque.

We plan to donate cookies to the Savanna U. S. O. Center on April 29.

In the address by Mrs. Mulsow we were reminded anew of the aims of the Auxiliary—the buying of bonds and the nurses loan fund.

Another state officer present was Mrs. Edward A. Hanske of Bellevue.

Mrs. Clarence A. Darrow, Secretary.

POTTAWATTAMIE COUNTY

The Woman's Auxiliary to the Pottawattamie County Medical Society has elected the following officers for the year: Mrs. Arnold L. Jensen, president; Mrs. Gerald V. Caughlan, vice president; Mrs. Aldis A. Johnson, secretary; and Mrs. Robert S. Moth, treasurer. Committee appointments for the year include: Program Committee, Mrs. M. C. Hennessy, chairman, assisted by Mrs. Robert S. Moth, Mrs. John P. Cogley, Mrs. Gordon N. Best, and Mrs. Fred H. Beaumont; Public Relations Committee, Mrs. Aldis A. Johnson, chairman, assisted by Mrs. Andrew A. Robertson; Courtesy Committee, Mrs. Eugene B. Floersch, chairman, assisted by Mrs. Arthur C. Brown; Telephone Committee, Mrs. Walter P. Hombach, chairman, assisted by Mrs. Vernon L. Treynor; Publicity Committee, Mrs. Isaac Sternhill. All officers and committee appointees are of Council Bluffs.

Mrs. Isaac Sternhill, Publicity Chairman.

WORTH COUNTY

Doctors' wives from Worth, Winnebago, Cerro Gordo and other surrounding counties assembled Tuesday afternoon in the Euchre and Cycle Club Rooms in Hotel Hanford, Mason City, to hear a talk by Mrs. Frederick W. Mulsow of Cedar Rapids, President of the Woman's Auxiliary to the Iowa State Medical Society.

The meeting was sponsored by the Worth County Medical Auxiliary of which Mrs. Soren S. Westly of Manly is president.

Luncheon was served at one o'clock following which Mrs. Mulsow discussed various activities of doctors' wives in wartime, stressing Red Cross work and the buying of war bonds.

Several new members were affiliated with the Auxiliary during the meeting.

Mrs. Soren S. Westly, President.

BOOK NOTES

In answer to the question which has long since become a reality, Dwight Anderson and Margaret Baylous tell the public what is necessary WHEN DOCTORS ARE RATIONED. Nathan B. Van Etten, M.D., past president of the American Medical Association has written an introduction for the book which gives assurance that adequate medical care will be provided for the millions still on the home front.

What could be more welcome than Linda Marvin's HOUSEKEEPING MADE EASY? The author, a noted radio authority, gives 2,000 shortcuts for housework. Making two pounds of butter from one is not new, and most of us know how to hold a broom; however, beauty treatment for the hands while housecleaning smacks of novelty and good sense.

P. J. Steincrohn, M.D., a practicing physician in Hartford, Connecticut, and the author of other medical literature for the layman and the profession, presents an enlightening discussion in his new book, HEART DISEASE IS CURABLE. He gives reassurance to those who are actually victims of heart disease and those who believe they have heart ailments.

A book by Karl Menninger, M.D., is always welcome news to the reading public. His new one LOVE AGAINST HATE, is based upon the old theme of the power of love in solving personal and social problems. Although the book is written for the layman, it is strictly scientific and highly instructive.

Mrs. Keith M. Chapler.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.

WOI— Wednesdays at 2:05 p. m.

May 3- 5 Diabetes
Edwin B. Winnett, M.D.

May 10-12 Anemia
Maria E. Haumeder, M.D.

May 17-19 Prenatal Care
Martin J. Reimringer, M.D.

May 24-26 Arthritis
Fred L. Knowles, M.D.

May 31-June 2 Asthma
Kenneth L. Johnston, M.D.

SOCIETY PROCEEDINGS

Black Hawk County

The Black Hawk County Medical Society held its regular monthly meeting Tuesday evening, April 27, at Black's Tea Room in Waterloo. The guest speaker of the evening was Thomas F. Thornton, Jr., M.D., of Chicago, who discussed Surgical Removal of Lung Tissue in Tuberculosis.

S. A. Barrett, M.D., Secretary

Buchanan County

The quarterly meeting of the Buchanan County Medical Society was held in Independence Thursday evening, March 25. The scientific program for the evening consisted of a motion picture entitled Peptic Ulcer, which was shown with the compliments of John Wyeth and Brother, Inc. Following the showing of the film a short business meeting was held.

James W. Barrett, Jr., M.D., Secretary

Cerro Gordo County

The March meeting of the Cerro Gordo County Medical Society was held at the Hotel Hanford in Mason City Friday evening, March 26. Following dinner a discussion of Post War Medical Plans was presented by William W. Bauer, M.D., Chicago, Director of the Bureau of Health Education of the American Medical Association.

Chickasaw County

Officers elected to serve the Chickasaw County Medical Society during 1943 include: Dr. Nicholas Schilling, president; Dr. Maria Eva Haumeder, secretary and treasurer; Dr. Paul E. Gardner, delegate; and Dr. Hans Haumeder, alternate. All officers are of New Hampton.

Crawford County

The Crawford County Medical Society re-elected its officers to serve during this year. The officers are: Dr. Edward V. Zaeske of Charter Oak, president; Dr. Dora E. K. Zaeske of Charter Oak, secretary and treasurer; Dr. Amandus H. Grau of Denison, delegate; and Dr. Henry D. Jones of Schleswig, alternate.

Dallas-Guthrie Society

The regular monthly meeting of the Dallas-Guthrie Medical Society was held in Panora Thursday, April 15, at 12:30 p. m. The scientific program consisted of a talk on Recent Developments in Communicable Disease Control by Carl F. Jordan, M.D., Des Moines, Director of the Preventable Disease Division of the State Department of Health; a film entitled Diagnosis of Syphilis, presented by Andrew C. Woofter, M.D., Des Moines, Acting Director of the Division of Venereal Disease Control of the State Department of Health; and a recorded medical lecture and film on Postoperative Gastro-intestinal Disturbances by Charles B. Puestow, M.D., of Chicago.

S. J. Brown, M.D., Secretary

Greene County

The April meeting of the Greene County Medical Society was held at the Greene County Hospital in Jefferson Thursday, April 8, at 8:00 p. m. Roy E. Parry, M.D., of Scranton talked on Geriatrics—Green Pastures to Explore, following which a short business meeting was held.

John R. Black, M.D., Secretary

Johnson County

The regular monthly meeting of the Johnson County Medical Society was held at Hotel Jefferson in Iowa City Wednesday, April 7, at 6:00 p. m. The scientific program consisted of a lecture on the Treatment of Pneumococcal Pneumonia by Forest H. Coulson, M.D., of the Department of Medicine, and a discussion of Atypical Pneumonia by D. W. Chapman, M.D., also of the Department of Medicine.

A. L. Sahs, M.D., Secretary

Keokuk County

The Keokuk County Medical Society met in Sigourney Thursday evening, April 8, at which time the doctors' wives were guests at dinner. The guest speaker for the evening was Ruth E. Church, M.D., of Washington, who spoke on Nutrition.

Scott County

The April meeting of the Scott County Medical Society was held Tuesday, April 6, at the Lend-A-Hand Club in Davenport at 6:00 p. m. William D. Paul, M.D., of the Department of Internal Medicine at the State University of Iowa was the guest speaker for the evening.

Leo J. Miltner, M.D., Secretary

Webster County

The Webster County Medical Society met at the Wahkonsa Hotel in Fort Dodge Tuesday, April 6, at 7:30 p. m. The guest speaker was Mr. J. S. Ketchum of Detroit, Michigan, Executive Vice President of the Michigan Medical Plan. A question and answer period was held at the conclusion of Mr. Ketchum's talk.

Woodbury County

The April meeting of the Woodbury County Medical Society was held at the Martin Hotel in Sioux City Thursday, April 22, at 6:30 p. m. Henry C. Hesseltine, M.D., Assistant Professor of Obstetrics and Gynecology at the University of Chicago, discussed Office Procedures in Gynecology and Comments on Caudal Anesthesia in Obstetrics.

Roland T. Rohwer, M.D., Secretary

Worth County

The regular meeting of the Worth County Medical Society was held Wednesday evening, March 31, at the office of Dr. Russell L. Olson in Northwood. The following officers were elected to serve the society during the year: Dr. Burdette H. Osten of Northwood, president; Dr. Monroe P. Allison of Northwood, secretary and treasurer; and Dr. Soren S. Westly of Manly and Dr. Osten, delegates.

PERSONAL MENTION

Dr. Velura E. Powell of Red Oak has announced her retirement and the sale of the Powell School to Mr. Riley C. Nelson of Council Bluffs. Dr. Powell will continue to live in Red Oak.

Dr. Erwin J. Gottsch of Shenandoah spoke before the Kiwanis Club of Clarinda at its meeting Tuesday evening, April 6. Dr. Gottsch discussed The Business Man's Heart.

Dr. John H. Sherlock of Larchwood has moved to Rock Rapids and opened an office there for the practice of medicine. However, he will also maintain his office in Larchwood.

Dr. Frank E. Coburn of the Psychopathic Hospital in Iowa City was the guest speaker at a meeting of the Child Conservation Club of that city Tuesday afternoon, April 13. The subject of Dr. Coburn's address was Children and War Work.

Dr. James T. McConnaughey, who has recently been employed in the Ordnance Plant at Burlington, is reopening his office in Mount Pleasant.

Dr. Norman D. Render, superintendent of the state hospital at Clarinda, spoke before the Kiwanis Club of Shenandoah at its meeting Monday evening, April 5. Dr. Render discussed Mental Hygiene.

Dr. Ernest L. Glasscock of Burlington discussed The Importance of a Summer Round-Up at a meeting of a group of summer round-up chairmen and assistants at the public library in Burlington Wednesday afternoon, April 7. The meeting was open to all mothers of pre-school children and others who were interested in attending.

Dr. Ward A. DeYoung has resumed the practice of medicine in George after receiving from the War Department the official notice of his retirement from active duty.

Dr. Charles H. Cords of Rudd has taken over the practice of the late Dr. Henry H. W. Kruse of Rockford.

DEATH NOTICES

Hansell, William, of Ottumwa, aged eighty-eight, died April 6 following an illness of several months. He was graduated in 1891 from Rush Medical College in Chicago, and at the time of his death was a life member of the Wapello County and Iowa State Medical Societies.

Kelly, Harry Delman, of Council Bluffs, aged sixty, died April 20 following an illness of a few weeks. He was graduated in 1903 from the Creighton University School of Medicine, and at the time of his death was a member of the Pottawattamie County Medical Society.

Kruse, Henry H. W., of Rockford, aged fifty-two, died March 28, following an illness of six weeks. He was graduated in 1922 from the University of Jena Medical School in Jena, Germany, and at the time of his death was a member of the Floyd County Medical Society.

Laird, John W., of Mount Pleasant, aged seventy-one, died suddenly April 12. He was graduated in 1900 from the Hahnemann Medical College and Hospital in Chicago, and at the time of his death was a member of the Henry County Medical Society.

O'Toole, Thomas Joseph, of Eagle Grove, aged seventy-two, died April 14 following an extended illness. He was graduated in 1895 from the University of Nebraska College of Medicine, and at the time of his death was a member of the Wright County Medical Society.

Slavin, Charles Thomas, of Moravia, aged seventy-one, died suddenly March 31 following a heart attack. He was graduated in 1904 from Barnes Medical College in St. Louis, and at the time of his death was a member of the Appanoose County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WALTER L. BIERRING, Des Moines, *Chairman*
DR. HENRY G. LANGWORTHY, Dubuque, *Secretary*
DR. JOHN T. MCCLINTOCK, Iowa City
DR. FRANK M. FULLER, Keokuk
DR. PAUL E. GARDNER, New Hampton

A History of Medicine in Plymouth County

WENDELL L. DOWNING, M.D.,
Le Mars, Iowa

(Continued from last month)

AKRON

The town of Akron, which was originally platted as Portlandville in 1871, is located on the Big Sioux River in the extreme western portion of Plymouth County. The land had been homesteaded as early as 1857.

Dr. Renaldo De Melville Clark was the first Akron physician. He was born in New York in 1842 but later moved to Wisconsin. At the age of twenty-four he enlisted in Company K of the 42nd Wisconsin Volunteers and served with his regiment until the end of the Civil War. In 1874 Dr. Clark was graduated from Rush Medical College in Chicago and after practicing in Wyocena, Wisconsin, he came to Akron (then Portlandville) in 1876. He had a large and successful practice for thirty years until his death from pneumonia in 1906 when he was sixty-four years of age. In 1876 he was married to Jane Davis. Dr. Clark was a member of the G. A. R. and Shrine.

Dr. John Tremaine was born in Greene, New York, in 1819. About 1870 he located near Akron in Dakota territory. He died in Akron but little information is available concerning this pioneer physician.

Dr. A. M. Cross was born in Elmyra, New York, in 1832. About 1885 he was graduated from the University of Iowa Dental and Homeopathic Schools and after first locating in Missouri Valley, he came to Akron in 1881. In 1888 he moved to Dakota but returned to Akron in 1895 where he practiced dentistry until 1902. In 1905 Dr. Cross died in Logan, Iowa.

Dr. G. V. Ellis was graduated from the University of Nebraska College of Medicine in 1888. He then came to Akron where he was a partner with Dr. R. D. Clark for a number of years.

Dr. F. A. Seeman was a graduate of the Chicago Homeopathic Medical College and was located in Akron for a short time about 1891.

Dr. Herbert H. Cilley was born in New Hampshire on September 23, 1858. He moved to Westfield, Iowa, with his parents in 1880. He attended the University of Iowa and was graduated in March, 1892, from Rush Medical College in Chicago. From 1892 until 1913 he was in active practice in Akron, after which he retired and moved to Long Beach, California. His death occurred July 17, 1917. Dr. Cilley was the owner of the second automobile in Plymouth County.

Dr. George Koch was born in Dubuque in 1879. In 1904 he was graduated from Rush Medical College in Chicago. After a year's internship at the Presbyterian Hospital in Chicago, Dr. Koch came to Akron where he practiced until 1918. He then moved to Sioux City. After many years of successful practice in internal medicine, he retired and moved to Los Angeles where he now lives.

Dr. N. P. Mead was born in Illinois and was a graduate of the University of Illinois College of Medicine. For a brief period during 1904 he was located in Akron.

Dr. Park A. Lillie was born in 1872 and was graduated in 1891 from the University of Illinois College of Medicine. He practiced in Akron from 1906 to 1908, and at last report was retired and living in Cloverdale, Indiana.

Dr. William F. Bushnell was born October 27, 1880, in Cedar Rapids, Iowa. In 1903 he was graduated from the University of Iowa College of Medicine. After an internship at St. Joseph's Hospital he was later assistant surgeon at the Firestone Clinic in Freeport, Illinois. In 1906 Dr. Bushnell located in Westfield and in 1910 he

moved to Elk Point, South Dakota, where he is now located.

Dr. Johnston H. Kerr of Akron was born August 31, 1876. In 1904 he was graduated from the University of Nebraska College of Medicine. After practicing in Worthing, South Dakota, for four years, Dr. Kerr came to Akron in 1908. In that same year he established the Akron hospital, which he still operates. From May, 1917, until June, 1919, he was on active duty with the Army Medical Corps and was in Le Mans, France, with the rank of captain for one year. In 1911 Dr. Kerr was married to Carolyn M. Bird of Missouri Valley, Iowa, and they have one son, Dr. Harper Kerr, who was graduated in 1941 from the University of Nebraska College of Medicine. After an internship in the Colorado General Hospital, Dr. Kerr's son is now a resident surgeon in the same hospital.

Dr. George Mattison of Akron was born in Ponca, Nebraska, August 12, 1887. He attended the University of Nebraska and was graduated in 1913 from Creighton University School of Medicine. After an internship in St. Frances Hospital, Colorado Springs, Colorado, he located in Akron in 1914. During the World War Dr. Mattison was a Lieutenant in the Medical Corps and was stationed at Camp Cody, New Mexico, from May, 1917, until November, 1918. In 1917 he was married to Ruth Thompson at Webster City. They have one daughter, Sally, a high school senior.

Dr. Walter J. Brunner of Akron was born in Jasper County, Iowa, on June 18, 1882. He attended the Iowa State Normal College and later the Keokuk Medical College. In 1909 Dr. Brunner was graduated from Northwestern University Medical School. After an internship of one year in St. Mary's Hospital, Milwaukee, Wisconsin, he located in Westfield in 1910. In 1914 he moved to Akron, where he is now located. In 1912 Dr. Brunner was married to Edith Gellim. They have one daughter, Margaret, a high school senior.

Hinton

Dr. Frederick W. Fletcher of Hinton was born in Thurman, Iowa, in 1880, the son of Dr. W. H. Fletcher. He attended pharmacy college at Fremont, Nebraska, and obtained a Ph.G. degree. After several years in the retail and wholesale drug business, he entered medical school and in 1912 was graduated from Creighton University School of Medicine. For several years he practiced in Nebraska and during the World War was in the medical corps of the army. In 1919 Dr. Fletcher located in Hinton and he has been in Hinton and Sioux City since that time. Dr. and Mrs. Fletcher have one son, David.

Dr. Aaron Q. Johnson of Sioux City was born in Akron, Iowa, on August 26, 1897. In 1926 he was graduated from Rush Medical College, and he then served a two year internship in St. Luke's Hospital in Chicago. In 1927 Dr. Johnson located in Hinton, and after a few years he moved to Sioux City to be associated with the late Dr. Edward Sibley. He now limits his work to surgery.

Kingsley

The town of Kingsley, which is located in the southeast corner of Plymouth County, was platted in 1883. At that time the business firms of Quorn, a town which was a mile to the west and which had been settled in 1880, moved to the new railroad town of Kingsley.

Dr. J. J. Wilder was the first physician in Kingsley. He was born in New York in 1840 and later moved with his parents to Wisconsin. During the Civil War he enlisted in the 23rd Wisconsin Regiment and saw four years of service. Dr. Wilder entered medical school after the war and was graduated from the Keokuk Medical College in 1865. After practicing in Washington, Iowa, for a number of years, he located in Kingsley about 1880, and he continued in practice there until his death in 1911 at the age of seventy-one years. He was married in 1864 to Mida Mead.

Dr. J. R. Walcutt was born in Ohio in 1855 and was graduated in 1883 from the Louisville Medical College. From 1886 until 1928 he was in practice in Kingsley. In 1928 he retired and moved to Texas, where he died in 1938.

Dr. J. W. Hipple, a graduate of the St. Louis Eclectic Medical College, was located in Kingsley about 1886.

Dr. Edmund H. Banks was born in Ohio and was a graduate of the Cincinnati College of Medicine and Surgery. He was located in Kingsley for a short time about 1887.

Dr. Rufus D. Mason was born in 1859 in Toledo, Iowa, and was graduated in 1887 from the University of Iowa College of Medicine. In 1888 Dr. Mason located in Kingsley. After several years he moved to Missouri Valley and then to Omaha. He later became Professor of Pelvic Surgery at Creighton Medical School and was on the staff of St. Joseph's and Mercy Hospitals in Omaha. Dr. Mason, who died in 1911, was a Fellow of the American College of Surgeons. He was married in 1884 to Helen Stone, and his widow still lives in Omaha.

Drs. Miller and Knepper were early Kingsley physicians, but no information is available concerning them.

Dr. John H. Rippey was born May 15, 1869, in Springfield, Missouri, and was the son of a phy-

sician. His parents moved to Winterset, Iowa, in 1875 and in 1889 Dr. Rippey was graduated from the University of Chicago Dental School. Continuing at Rush Medical College, he received his Doctor of Medicine degree in 1891 at the age of twenty-two years. Dr. Rippey was located in Audubon and Pierson, Iowa, and then came to Kingsley in 1898. After a few years of practice he developed lung trouble. He then spent some time in Colorado and died there in 1905 at the age of thirty-six years. He was married in 1894, and he and Mrs. Rippey, who still lives in Kingsley, had two sons, Ralph, of Le Mars, and Otto.

Dr. H. G. Wright was born in 1871 and was graduated in 1901 from the Drake University College of Medicine. He located in Kingsley that same year, and after a few years he moved to Des Moines where he continued in practice until he was killed in a car accident in 1941. Dr. Wright was buried in Merrill, Iowa.

Dr. B. F. Wendel was born in 1877 and was graduated in 1906 from the Sioux City College of Medicine. He was in practice in Kingsley from 1906 until 1930. He then moved to Texas, where he still lives.

Dr. E. J. Liechty of Kingsley was born in Polk County, Iowa, on January 24, 1879. In 1905 he was graduated from the Drake University College of Medicine. After practicing for five years in Mitchell, South Dakota, Dr. Liechty came to Kingsley in 1912, where he is still in active practice. In 1907 he was married to Abagail Edwards, a graduate nurse from the Sioux City Samaritan Hospital. They have two children, Joe and Jack.

Dr. Harold Wolfson was born in Chicago on January 3, 1904. He attended the Chicago public schools, and in 1925 he received his Bachelor of Science degree from the University of Chicago. The following year he received his Master of Arts degree in the Department of Physiology under Drs. A. J. Carlson and A. B. Luckhardt. He was a part-time instructor at his alma mater during 1925 and 1926 and was elected to Sigma Xi fraternity in 1926. In 1929 Dr. Wolfson received his Doctor of Medicine degree from Rush Medical College and he then was an intern for one year at the Mt. Sinai Hospital in New York. During 1930 and 1931 he was a research fellow in the Department of Physical Therapy at Northwestern University Medical School. After a brief practice in Chicago, Dr. Wolfson located in Kingsley in 1932. In August, 1942, he was commissioned Captain in the Medical Corps of the Army of the United States and at last report was stationed in the 68th Evacuation Hospital at Fort Lewis, Washington. On June 14, 1928, he was married to Dr. Dorothy Koch.

Dr. Dorothy Koch Wolfson was born in Tola, Kansas, October 28, 1903. After graduating from the Dallas, Texas, High School in 1917, she attended the University of Chicago and was graduated with a Bachelor of Science degree in 1925. In 1929 Dr. Koch was graduated in medicine from Rush Medical College and after a year's internship at New Rochelle, she spent a two years' residency in pediatrics at the Milwaukee Children's Hospital. In 1932 she came to Kingsley with her husband, whom she had married in 1928. In 1935 her first child was born. Aside from assisting her husband in obstetric surgery, she has not been in active practice since that time.

Merrill

Merrill was platted on February 27, 1872, by the railroad and a town lot company. The first medical service in its vicinity was rendered by a Doctor Hammersmith, not a medical graduate. For several years in the sixties he was located in Melbourne, the first county seat of Plymouth County, which was located four miles southeast of Merrill. Here this pioneer physician performed a real service to the early settlers. No other data is available concerning him.

Dr. William F. Berner, a graduate of Northwestern University Medical School, was located in Merrill for a brief period after 1887.

Dr. Henry Nigg of Merrill was born in Sioux City in 1863 and was graduated in 1888 from the University of Iowa College of Medicine. In 1889 he located in Merrill and enjoyed a large country practice for ten years. He then established a drug store which he conducted for many years. Dr. Nigg is still living in Merrill and enjoys good health.

Dr. Frederick G. Vernon of Jewell, Iowa, was born in Ontario, Canada, April 8, 1882. He attended Trinity and Toronto University Medical Schools, graduating from the latter in 1906 with Master of Science and Doctor of Medicine degrees. After a year's hospital service in the National Sanitarium, Cravenhurst, Canada, Dr. Vernon located in Merrill in 1907. In 1914 he married a graduate nurse, Alice Murphy, and they have four children. In 1933 Dr. Vernon moved to Jewell, Iowa, where he now practices.

(To be continued next month)

CHANGE OF ADDRESS

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THE JOURNAL BOOK SHELF

BOOKS RECEIVED

MEDICAL PARASITOLOGY—By James T. Culbertson, assistant professor of bacteriology, College of Physicians and Surgeons, Columbia University. Columbia University Press, New York, 1942. Price, $4.25.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY—By Jerome E. Andes, M.D., director of department of health, University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, $4.00.

STARLING'S PRINCIPLES OF HUMAN PHYSIOLOGY—Edited and revised by C. Lovatt Evans, D.Sc., Jodrell professor of physiology in University College, London; the chapters on the special senses revised by H. Hartridge, M.D., professor of physiology at St. Bartholomew's Medical College. Eighth edition. Lea and Febiger, Philadelphia, 1941. Price, $10.00.

SYNOPSIS OF ALLERGY—By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, $3.00.

ENCEPHALITIS: A CLINICAL STUDY—By Josephine B. Neal, M.D., clinical professor of neurology, College of Physicians and Surgeons, Columbia University. Grune and Stratton, New York, 1942. Price, $6.75.

ADVANCES IN PEDIATRICS—Edited by Adolph G. De Sanctis, M.D., New York Post Graduate Medical School and Hospital, Columbia University. Volume I. Interscience Publishers, Inc., New York, 1942. Price, $4.50.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES—By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, $4.50.

WAR MEDICINE—Edited by Winfield Scott Pugh, M.D., Commander (M.C.) U.S.N., Retired; formerly surgeon, City Hospital, New York. Philosophical Library, Inc., New York, 1942. Price, $7.50.

FUNDAMENTALS OF IMMUNOLOGY—By William C. Boyd, Ph.D., associate professor of biochemistry, Boston University School of Medicine. Interscience Publishers, Inc., New York, 1943. Price, $5.50.

OPHTHALMOLOGY AND OTOLARYNGOLOGY, Military Surgical Manuals II—Prepared and edited by the Subcommittee on Ophthalmology and Otolaryngology of the Committee on Surgery of the Division of Medical Sciences of the National Research Council. W. B. Saunders Company, 1942. Price, $4.00.

THE 1942 YEAR BOOK OR PHYSICAL THERAPY—Edited by Richard Kovacs, M.D., professor and director of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1942. Price, $3.00.

THE 1942 YEAR BOOK OF GENERAL THERAPEUTICS—Edited by Oscar W. Bethea, M.D., professor of clinical medicine, Tulane University School of Medicine. The Year Book Publishers, Chicago, 1942. Price, $3.00.

THE PRINCIPLES AND PRACTICE OF WAR SURGERY—By J. Trueta, M.D., formerly director of surgery, General Hospital of Catalonia, University of Barcelona; assistant surgeon, Wingfield-Morris Orthopaedic Hospital, Oxford; acting surgeon-in-charge, accident service, Radcliffe Infirmary, Oxford. The C. V. Mosby Company, 1943. Price, $6.50.

DISEASES OF THE SKIN—By Oliver S. Ormsby, M.D., Rush professor of dermatology, University of Illinois, and Hamilton Montgomery, M.D., associate professor of dermatology and syphilology, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, Rochester, Minnesota. Sixth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1943. Price, $14.00.

CHEMOTHERAPY OF GONOCOCCIC INFECTIONS—By Russell D. Herrold, M.D., associate professor of surgery (urology) College of Medicine, University of Illinois. The C. V. Mosby Company, St. Louis, 1943. Price, $3.00.

BOOK REVIEWS

ORTHOPEDIC SUBJECTS

MILITARY SURGICAL MANUALS IV

Prepared and edited by the Subcommittee on Orthopedic Surgery of the Committee on Surgery of the Division of Medical Sciences of the National Research Council. W. B. Saunders Company, Philadelphia, 1942.

The first section on ununited fractures has been written by Paul B. Magnuson, M.D. General considerations in the problem of bone grafting are fully covered. The chapter on mechanics of operation and their application to various sites of nonunion expresses the personal preference of the author, which has been gained from wide experience. Many of his "tricks of the trade" are described and profusely illustrated and certainly contribute to the ease of various operative procedures and effect the end results.

The second section on injuries of the spinal column has been prepared by a pioneer in the modern treatment of these injuries, namely, Arthur G. Davis, M.D. All spinal injuries are considered as to type, location, and involvement of the spinal cord or its appendages. The specific treatment indicated is given in a concise manner. The material is condensed to such a degree that each paragraph is important. It is the opinion of the reviewer that this section is the finest article on this subject that he has had the privilege of reading.

Section three on compound fractures and section four on osteomyelitis have been contributed by J. Albert Key, M.D. In his scientific yet practical manner, these subjects are covered thoroughly and systematically. What, when, and how to do a certain thing is clearly outlined. The author's enthusiasm for the use of the sulfonamides can be appreciated not through dogmatism, but rather through repetition. A generous bibliography appends these last two sections.

The entire manual, although based for the most part on experiences in civil life, is applicable to various phases of military problems. D. N. G.

MILITARY SURGICAL MANUALS V

Prepared under the auspices of the Committee on Surgery of the Division of Medical Sciences of the National Research Council. W. B. Saunders Company, 1943. Price, $2.50.

This manual is one of several prepared by the National Research Council to emphasize the diagnosis and treatment of conditions frequently encountered by physicians serving with the armed forces. In many instances the subjects covered will also confront the civil practitioner.

Burns are given considerable prominence. The local and systematic treatment is climaxed by a chapter on skin grafting by Lt. Col. James Barrett Brown, M.C., which is a lucid summation of his unique experience in this field.

The section on psychology, etiology, and treatment of shock, which is followed by a chapter on its prevention and treatment by Alfred Blalock, is much worth while.

The chapter on wound healing covers the practical aspects of this subject in a concise manner. It includes treatment with special emphasis on chemotherapy both locally and generally.

Vascular injuries encountered less frequently in civil life than military practice will arouse considerable interest, especially among physicians in the armed forces since these conditions often confront the military surgeon.

I can recommend this manual highly to all practicing physicians. Its many illustrations and readable style make pleasurable reading. J. B. P.

ESSENTIALS OF GYNECOLOGY

By Willard R. Crooke, M.D., professor and head of the department of obstetrics and gynecology, University of Texas. J. B. Lippincott Company, Philadelphia, 1943. Price, $6.50.

This volume is concise and to the point, thus providing a valuable reference book when time is a consideration. It is well illustrated, with many of the illustrations appearing in color.

The topics are those often omitted from other texts and those frequently sought by the practitioner. In discussing treatments, the pitfalls are considered along with the details of therapy in a brief, but thorough manner.

I consider this a valuable addition to any medical library. F. W. R.

FRACTURES

By Paul B. Magnuson, M.D., associate professor of surgery, Northwestern University Medical School, attending surgeon, Passavant Memorial Hospital, and Wesley Memorial Hospital, Chicago. Fourth edition, revised. J. B. Lippincott Company, Philadelphia, 1942. Price, $5.50.

A technical book so well written that it is a pleasure to read is uncommon; but added to the literary quality of this book are clarity, excellent arrangement of the subject matter, and superior illustrations. The drawings are exceptionally well done. The reproductions of radiographs include none that are indistinct or indefinite. There is no senseless repetition.

The procedures described appear to be those found efficient in the author's own service, not merely included because they have always been found in books. The subject is well covered.

It is the opinion of the reviewer that this is one of the best books on fractures ever to be published. It is excellent for the general practitioner and could be read and reread by specialists with profit.

V. A. R.

OVARIAN TUMORS

By Samuel H. Geist, M.D., attending gynecologist, Mount Sinai Hospital; clinical professor of gynecology, College of Physicians and Surgeons, Columbia University. Paul B. Hoeber, Inc., New York, 1942. Price, $10.50.

This text presents a most complete description of ovarian tumors, prefaced by a discussion of the general considerations of the embryology anatomy and physiology of the ovary. The author presents another complete classification of ovarian tumors based upon his conception of their origin. The different benign and malignant neoplasms are adequately discussed from the standpoint of the clinical as well as pathologic and microscopic characteristics.

The latter chapters in the text are devoted to ovarian tumors in children, ovarian tumors in pregnancy, diagnosis of ovarian tumors, and treatment.

Throughout the book, adequate illustrations of the specimens of the tumors and their microscopic architecture are presented. The text has been very carefully organized and written, and is a valuable addition to our knowledge of ovarian tumors.

A. W. B.

PEDIATRIC GYNECOLOGY

By Goodrich C. Schauffler, M.D., Assistant Clinical Professor of Obstetrics and Gynecology, University of Oregon Medical School The Year Book Publishers, Chicago, 1942. Price, $5.00.

This text presents a clinical study of the genitourinary system of the female child from infancy throughout puberty from both an anatomic and a physiologic viewpoint.

Detailed description is made of normal variations and congenital anomalies of the external and internal genitalia. Each chapter is well illustrated by diagrams and original drawings. The diagnosis and treatment of non-specific and specific vaginitis are adequately discussed.

The many hormone preparations commercially available are grouped together in the appendix. Each preparation is listed according to the kind of hormone, the route of administration, and the dosage available.

This volume should prove helpful to general practitioners, gynecologists and pediatrists. C. F.

The JOURNAL
of the
Iowa State Medical Society

VOL. XXXIII DES MOINES, IOWA, JUNE, 1943 No. 6

MEDICINE IN THE WAR EFFORT*

BRIGADIER GENERAL CHARLES H. GRAHL
State Director of Selective Service
Des Moines

It is indeed an honor, a privilege, and a pleasure for me to be permitted to speak on this program of the ninety-second annual session of the Iowa State Medical Society.

As a citizen, with a wife and two sons in their middle teens, I have admired medical men and women ever since I was old enough to form an opinion; as a soldier in the 168th Infantry of the Rainbow Division overseas in the first World War, I saw many never-to-be-forgotten examples of the valor and nobility of the men and women of our army medical corps; and as State Selective Service Director ever since the system began functioning in 1940, my opportunities to see our examiners, advisers, and counselors in action have still further intensified my respect and esteem for those who are engaged in your vocation.

Here I want to pay tribute publicly to the 643 doctors who have served with our 120 local boards in Iowa, the 141 on our eleven medical advisory boards and the five attached to our five government boards of appeal. They have done a truly marvelous job for which I shall be everlastingly grateful. That so many of our physicians before Pearl Harbor, and since, would cheerfully give freely of their valuable time and knowledge without pay is striking evidence that no profession in America is more American than yours.

I am informed that 713 of the 2,490 members of the Iowa State Medical Society are in uniform in our nation's armed forces, and I am told that about 104 more will join them during 1943. My earnest congratulations to your organization on such grand contributions to the cause of freedom.

Here, too, I would as warmly praise the doctors who must remain on the home fronts for the aid they are giving the Red Cross, their assistance in immunizing and vaccinating, and the countless other things they are doing in the numerous war activities.

Modestly, may I report that Selective Service is operating as smoothly in Iowa as it is in any other state in the Union. Sincerely, I say to you that much of the credit is due to the medical personnel.

As an Iowan, I am proud that mentally and physically our sons called to military service are above the average for the country. This reflects high efficiency on the part of our citizens responsible for the health of our population.

All Iowans share your pride in the ability which Iowa medical men are displaying in service in the camps and bases at home and with the men on land, on the seas, under the seas, and in the air in the battle zones all over the world. All are sad with you that some of your members have made the supreme sacrifice and others have been taken prisoner. We think now of Lieutenant Martin E. Harlan of Onawa, who was drowned in the South Pacific, and Captain Floyd Burgeson of Des Moines, who was captured by the Nazis, to mention two of them.

All Iowans honor the medical men at home who because of the emergency are rendering tremendous service at heavy cost to their own comfort and health. In wartime there are always casualties behind as well as in the combat lines, and in no calling is that more true than it is of the one in which you are engaged.

I could cite many doctors whose work in and out of uniform is a stirring story, but time will permit me to mention only one who, after a long, brilliant, private career, is now doing outstanding duty in our Selective Service System. He is Dr. Clyde A. Boice of Washington, a councilor of the Iowa State Medical Society, who is participating in his third mobilization. As a young man he assisted his father in examining men for the Spanish-American War; he was an examiner in World War I; and at present is chairman of the examin-

*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.

ing group of Washington County and serving on the Medical Advisory Board as a radiologist.

I need not tell you what would be the fate of the American people if it were denied medical treatment and care for a few months, nor need I remind you that without their medical corps our fighting forces would quickly perish from several causes. To say that our nation would speedily perish without you is to express a plain but terrifying fact. With that feeling we shall ever exert our utmost influence to halt any move which might in the least change or affect your status adversely. If we can ever be of help to you in any manner whatsoever, we shall be only too eager to try to extend it.

Medical science has advanced faster than any other in the United States in the last three quarters of a century. It will attain far loftier heights in the coming seventy-five years if it is permitted to pursue its present policies. As a layman I have only general knowledge of what the practice of medicine has meant to civilians, but as an army officer I have read much of what medical men and women have done in our War Department, both in peace and war.

The Medical Department of the Army of the United States had its origin at the very beginning of our national history. The Continental Congress created the first military-medical service in America upon the recommendation of General George Washington in 1775. In this early period, each of the widely separated branches had its own medical service. There was no central medical organization until one was created under a director general and chief physician, who was Dr. Benjamin Church of Boston.

After the Battle of Bunker Hill, when several large homes were used as hospitals, Congress put the medical personnel in two classes: for a hospital, two surgeons and two surgeon's mates; for a regiment, one surgeon and two surgeon's mates.

The army made its first request for women to care for the wounded in 1775. Dr. John Jones included in his book, the first in America on surgery, a chapter on camp and military hospitals.

In 1776, the Continental Army retreating from Quebec was hit by a smallpox epidemic. Orders forbade the use of inoculations but the soldiers themselves commonly put it into practice by self-administration.

In 1777 Benjamin Rush published a pamphlet on the hygiene of troops, entitled "Directions for Preserving the Health of Soldiers."

Dr. William Shippen, Jr., director general of the military hospitals of the Continental Army, drew up a plan for "flying" ambulances. These chariot-like vehicles were used to bring doctors to patients in the field rather than to take patients to doctors or hospitals.

Congress passed a resolution in 1778 to fine each officer who entered a hospital for treatment of venereal disease ten dollars, and each soldier four dollars.

From 1790 to 1798 the army increased the strength of its regiments. Medical officers were appointed regimental surgeons, but no central organization for these services was provided. Members of the Army Medical Department were given uniforms in 1813 for the first time. The uniform was black, with a very high collar in front. In 1814, the first Medical Department regulations were embodied in the army regulations.

Dr. Joseph Lovell, as a reward for his excellent service in the Northern Division in the War of 1812 and his written "Remarks on the Sick Report of the Northern Division for the Year Ending June 30, 1817," was appointed the first surgeon general of the army in 1818.

In 1833, Dr. William Beaumont, encouraged by General Lovell, made his abstract report on "Experiments and Observations on the Gastric Juice and the Physiology of Digestion." This report was based on his experiments on Sergeant Alexis St. Martin, who developed a gastric fistula following a gunshot wound through his stomach.

The Library of the Surgeon General's office was founded in 1836.

In 1851, the first delegate from the Army Medical Department was sent to a meeting of the American Medical Association.

In 1862, William A. Hammond was appointed surgeon general. He was the first medical officer to hold the rank of brigadier general, and in that year the "Letterman Plan" for the evacuation of sick and wounded was used successfully at the Bloody Battle of Antietam in the Civil War. It involved the use of field aid stations, ambulances, field hospitals, hospital trains, and general hospitals, upon which is based the present method of evacuation of the sick and wounded in battle.

George Miller Sternberg, a medical officer and noted bacteriologist, discovered the pneumococcus and photographed the tubercle bacillus for the first time in 1881.

Surgeon General Charles Sutherland, in 1891, indicated that the medical department was beginning to realize definitely the importance of sanitation in the housing of troops.

On September 17, 1891, the Association of Military Surgeons was founded, which now includes medical department officers from all government services. Its members receive the magazine, "Military Surgeon," which is published monthly and always contains many timely articles. The Asso-

ciation of Military Surgeons is now an incorporated body of medico-military men recognized by the Federal Government. Its organizer was the late Nicholas Senn, a former surgeon general of the United States.

To you Iowans who belong to the group known as Military Surgeons, which was formed in 1920 and meets for a dinner and program during each convention of the Iowa State Medical Society, I extend felicitations and good wishes. Your organization will, of course, be much larger after the present war than it is now, and I am confident it will then, as it has in the past, be ever alert to the national defense needs of the nation.

In 1895, the army medical department adopted the metric system of weights and measures for pharmaceutical procedures and prescriptions.

Between 1875 and 1898, field sanitation became of major interest and military medicine began to have a prominent part in military affairs.

In the period covered by 1898, the year of the Spanish-American War, and 1899, the typhoid fever board of which Dr. Walter Reed was a member, made a detailed study of the epidemiology of typhoid fever in American military camps. The board concluded that the fever was not a strictly water-borne disease, and that it could be, and was, spread by personal contact.

The future of the Dental Corps became evident at this time and Hospital Steward J. W. Horner was assigned as corps dentist.

The Army Nurses Corps was organized in 1899.

In May of 1900, a board, of which Major Walter Reed was in command, learned that yellow fever was transmitted by mosquitoes.

Major William C. Gorgas, after acting on the Reed board findings, reported from Cuba in 1903 that no new cases of yellow fever had originated there in two years.

In 1909, the first typhoid vaccine prepared at the army medical school was ready for use, and it was given to 830 individuals that year. Voluntary venereal prophylaxis was also started at this time.

In 1910, Leonard Wood, captain and assistant surgeon, was appointed major general and chief of staff of the army, the first medical department officer to obtain that rank and position. General Wood, as you older men will recall, served with distinction in World War I, and in 1920 was a formidable candidate for nomination for the presidency in one of the major political parties.

Another medical man who rose to the top in the army is our own Dr. Mathew A. Tinley, who returned from France in 1919 as colonel of the 168th Infantry. He was major general of the 34th Division of the National Guard for many years, retired a lieutenant general on March 5, 1940, and with that rank is now commanding officer of the Iowa State Guard. Incidentally, he is a Selective Service medical advisor.

Major C. R. Darnall originated the liquid chlorine method of water purification in 1910.

Congress recognized the National Red Cross in 1912.

In 1916, the strains of paratyphoid A and B were added to the typhoid vaccine used by the army and venereal prophylaxis was made compulsory.

On September 4, 1917, First Lieutenant William T. Fitzsimons, an American medical officer, was killed by an enemy airplane bomb that was dropped near Camiers, France, in the area of General Hospital No. 11 of the British Expeditionary Forces. He was the first American officer to lose his life in the war, and the War Department named what was then the largest army hospital the Fitzsimons General Hospital, which is located at Denver, Colorado.

On October 18, 1917, a medical board was established by the adjutant general's office to consider all matters pertaining to physical examinations and physical standards of airplane pilots. The Research Laboratory for Aviation Medicine was completed at Hazelhurst Field, Long Island, New York, in 1918. The Division of Psychology was established to eliminate mental defective persons and classify personnel examined for special services. Also during this year, Colonel Merritt W. Ireland was made brigadier general and the chief surgeon of the American Expeditionary Forces. The personnel of the Medical Department of the American Expeditionary Forces had increased to 9,601 officers, 4,735 nurses and 67,144 enlisted men. The medical department in World War I treated 4,000,000 sick and wounded men in hospitals, and over 7,000,000 men were given physical examinations.

In May of 1919, the Medical Research Laboratory and School for Flight Surgeons was established in Hazelhurst Field, Long Island. In June, a serious outbreak of typhus fever in Serbia led to the dispatch of a commission by the American Red Cross to fight the disease. Lieutenant Colonel Edgar Erskine Hume was its chief medical officer.

The army was one of the first organizations to put many modern health measures into successful practice. A few of these are: Regular physical examination of the personnel; routine immunization against typhoid fever, smallpox, diphtheria, tetanus and yellow fever, and the control of venereal disease. The health of Americans in uniform and out is constantly improving as a result

of improved medical care and sanitation, for which all of our citizens should give thanks to the medical profession.

The number of lives which have been saved by the discovery of the method of water purification and the fact that the mosquito is a germ carrier of yellow fever, malaria, and other diseases staggers the imagination. The army has another conclusive record of the control of typhoid fever in the Civilian Conservation Corps, which had an average personnel of 300,000 young men. Army methods resulted in there being less than 0.25 cases per thousand men each year.

In addition to the administration of typhoid prophylaxis in the form of inoculations and sanitary measures, the army produces a vast amount of typhoid vaccine in its laboratories for use in national emergencies.

The army medical department has ever been quick to advance the knowledge and study of preventive medicine. Study of pneumonia is today being enhanced on a wide scale, especially the preventive and protective measures.

The military departments of our government began early to promote the control of venereal disease. During the Civil War the venereal rate was 215 cases per thousand men in service and there was only slight improvement in the Spanish-American War. With the advent of compulsory preventive methods in the army in 1909, the rate was greatly reduced.

The army's part in tropical medicine has been executed in large degree away from our mainland. Discovery and eradication of hookworm among the natives of Puerto Rico by Colonel Bailey K. Ashford is one example.

In the Philippines, the army encountered a disease prevalent among the natives called beri-beri, caused by food deficiency from eating only highly milled or polished rice. This discovery led to further scientific work on vitamins which are now common food topics of discussion in all housewives' magazines. Balanced diets and the study of essential food elements in the diet are now carefully considered in the preparation of army rations.

The army tropical board made many additional contributions to the advancement of medicine. Cholera was among the first diseases to demand the attention of the army and medical departments of other government agencies in Manila. It was a problem of sanitation which was readily conquered, with attendant reduction of the high mortality rate.

Smallpox vaccination in the army is a routine procedure, and not a single officer or man is omitted. Hundreds of thousands of civilians have been benefited by this kind of inoculation against a severe disease while on active or temporary army duty. The army has proved that the presence of this unnecessary affliction depends upon the extent of vaccination.

During the Spanish-American war, dysentery was one of the worst diseases among American troops. Bacillary and amoebic dysentery were both prevalent. Extensive studies and investigations by the army produced strong control measures.

Here, I am sure you would want me to recognize the value of the cooperation of the dental corps with the medical corps of the army.

Army dental officers have over a period made gratifying progress in reducing the suffering and noneffectiveness which results from valvular heart disease, arthritis and rheumatism. Every member of the army has a dental survey at least once every year; then proper treatment is scheduled and conducted for the individuals who have defects. The removal of apical abscesses, the cure of gum infections, and the care of carious teeth and dental cavities have produced marked health benefits.

Dental officers, although unheralded by publicity, have quietly and conscientiously assisted the army medical officers in efforts to preserve the fighting strength of the army. In conjunction with the dentists, the medical officers have removed other foci of infection, especially diseased tonsils. It is evident that much success has come from this cooperative endeavor, and it will become better understood as the younger generation reaches the arthritic ages.

As I see it, medical progress is most manifest in the negative—the absence of disease—which recalls what I once heard an old wag remark to a country doctor: "Doc, I wouldn't want your job because you are always workin' agin' yourself."

We of the army are proud of our medical department, and we deeply appreciate the constant help which civilian doctors are ever ready to give our military doctors. We are proud, too, over the alacrity with which able-bodied civilian practitioners leap to the need when our nation is forced to mobilize for war. Men of all professions and trades answer the call. Most of them are valuable but there is no group which fits in more smoothly than do the medical men. "How soon could you start for the South Seas?" a regular army officer asked a young Iowa physician who had just been sworn in as a first lieutenant. "Right now," was the quiet reply. He was ready and only a few weeks elapsed before he was out there, serving as capably and calmly as if he had been on that assignment for years.

It is not amiss for me to say, I am sure, that if all elements in America had been as well prepared for war prior to Pearl Harbor, as was the medical profession, the Japanese, egged on by the Nazis and Fascists, might not have launched the treacherous attack which hurled us into the present conflict.

I was deeply interested in reading in the Wellcome Prize Essay in the *Military Surgeon* of December, 1942, these paragraphs:

"It is germane to our discussion to state that American soldiers, sailors and marines are the finest physical specimens of military men in the world and that they have outstripped their own predecessors. The average American soldier is today 67½ inches in height and weighs 152 pounds; during the World War he averaged 142 pounds, and during the Civil War only 136 pounds. His average height did not change significantly through these years.

"Furthermore, increased longevity and decreased mortality and morbidity, the latter two particularly in childhood, since the turn of the century are largely the result of advances in medical care. There is no country of comparable size in the world that can boast the high quality and wide distribution of medical care that obtains in the United States.

"Life expectancy at birth increased from 34 years in 1879-1889 period to more than 63 years in 1941. Let us remember that thousands upon thousands of young defenders are alive and able to serve our country today because medical advances of recent decades have spared them an early death or the debilitating diseases and conditions that would have otherwise disqualified them for general military service. Let us avoid the facile temptation to base sweeping conclusions upon inadequate or superficial knowledge, and, instead, maintain a healthy scientific skepticism that makes us search out facts and achieve understanding by controlled experience."

The writer of the essay continues: "These facts in defense of American medicine are interjected because some individuals have implied in written and spoken word that physicians have failed in some way to live up to their glorious tradition of service to mankind and that they alone are responsible for the defects revealed among registrants for Selective Service. In the discussion and criticism that follow we would not put ourselves among these critics, but rather among those who give due recognition to past achievements and yet care to believe that medicine neither as a science nor as a practice is beyond progressing and adapting itself to new social needs."

It is, of course, silly and ridiculous to us who know the facts for anyone to blame our medical men and women for the failure of some of the registrants to qualify physically for military service. In the light of the record of what medicine has done for Americans, it is pertinent to ask such critics what would be the state of our people if we had not had keen-minded, loyal citizens devoting their talents and lives to the alleviation of suffering. One need look only at the condition of the races who have not had the benefit of medical science for the answer.

How long World War II will last, I cannot prophesy. How many men will be put in uniform, I cannot say. I can only tell you that we shall have to mobilize military strength enough to win complete and lasting victory and fight until the job is done, regardless of how long that may be.

We shall lose many American lives in the battles which must be fought. Thousands of men will be wounded and will need medical treatment for months, even years, after they are carried from the fields of combat. In the thick of all hostilities ahead, as they have been in the past, our medical officers and nurses and the enlisted men serving under them will conduct themselves in accord with the noblest of American traditions. In the constantly increasing problem of caring for Americans at home, I know the medical men and women here will accept the ever growing burdens and trials which will be thrust upon them.

Thinking, loyal Americans recognize World War II as a struggle between the democracy which we cherish and the dictatorship which to conquered peoples means enslavement and torture. What has occurred in other lands would occur here if the American people did not determine to prevent it at any cost of life, suffering and treasure.

An indication of the feeling of the parents of an Iowa youth who was lately inducted into the army about doctors is in this true tale. In the town where they lived a doctor close to sixty years of age and a doctor under thirty were practicing prior to Pearl Harbor. The young physician promptly entered the army. When the inductee departed, his father said: "If all of the doctors in the army are like the young one who went from here we needn't worry about our sons getting the best of care if they get hurt, and we at home don't need to worry so long as we may have our older doctor with us." The "older doctor" is now working as hard as he did when he was under thirty, and is happy about it. "We have a war to win," he smiled, in a recent conversation about the pace he was traveling.

I have absolutely no fears as to what our medical men and women will do in this war, whether in

uniform or not, regardless of how long it may continue. I am confident that if all of our people will meet the challenges and tests of the situation as you and your colleagues will, victory will come at a not too distant day. I know, too, that as you have served in wartime you will serve in the trying rehabilitation era after the war ends, with skill and zeal which will go far toward preserving that for which we fought. You will do your part, come what may, for you know no other way of life.

MASSIVE ARSENOTHERAPY IN EARLY SYPHILIS BY THE CONTINUOUS INTRAVENOUS DRIP METHOD

PRELIMINARY STUDY IN IOWA

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There is much current interest in one of the newer methods of treating syphilis, namely, the five-day intensive intravenous drip method. Under supervision of the United States Public Health Service, thirteen clinics in the midwest were selected to take part in an extensive trial of this method. The Iowa State Department of Health participated in this study by treating a series of cases in the Venereal Disease Clinic of Broadlawns General Hospital in Des Moines.

The first series of patients to be treated in the United States by the five-day intensive intravenous drip method was carried out in 1933 by Chargin Leifer, and Hyman.[1] In this series neoarsphenamine was used, 4 to 4.5 grams of the drug being administered in five days, which was an amount equal to that ordinarily given in three months. The series included twenty-five patients with early syphilis. Four years later a second group of eighty-six patients was treated with neoarsphenamine. The use of mapharsen was begun in 1938, and by April of 1940 about 265 patients had been treated with this drug. Favorable results have stimulated the use of this method of treating early syphilis not only in the thirteen clinics under direction of the United States Public Health Service but also in many other hospitals.

It is the purpose of this paper to report the preliminary work done in Broadlawns General Hospital from July 1, 1940, to June 30, 1942, on forty-one patients with early syphilis treated with mapharsen by the five-day intensive intravenous drip method. Table I shows the distribution by admission diagnosis of the forty-one cases. Of these, nineteen were men and twenty-two women. Twelve of the men had primary syphilis and seven secondary syphilis. Of the women, only four had primary syphilis and sixteen secondary syphilis; one of the patients with secondary syphilis was at term; and two patients had early latent syphilis, one of whom was two months pregnant at the time of her treatment.

TABLE I
Distribution by Admission Diagnosis of Forty-one Cases Studied

Diagnosis	Number	Per Cent
Seronegative Primary	8	19.5
Seropositive Primary	8	19.5
Secondary	23	56.1
Early Latent	2	4.9
Total	41	100.0

In this group the patients ranged from a girl fourteen years of age with condylomata lata to a colored man sixty-four years of age with a primary chancre; twenty-three of the forty-one were twenty-five years of age or under. Twenty-nine of the forty-one patients were white and twelve colored, the reverse of the ratio in many eastern and southern clinics.

Eleven of the twelve men with primary syphilis had darkfield positive lesions; the twelfth could not be examined because of phimosis. All four of the women with primary syphilis had darkfield positive lesions. Two lesions were cervical, the third was on the labia minora, and the fourth on the labia majora. Seven men had secondary syphilis, and positive darkfield examinations were obtained on two of them. Of the sixteen women with secondary syphilis, ten positive darkfield examinations were obtained, two were negative and in the other four a darkfield examination was not attempted. All of the positive darkfield examinations in the cases of secondary syphilis were made from labial or perineal condylomata lata except one, which was made from a moist annular lesion at the buccal angle. Attention is called to the fact that sixteen of the forty-one were cases of primary syphilis; of these, eight were seronegative primaries in which the diagnosis was made only with the aid of the darkfield microscope. This illustrates the importance of the use of this method in diagnosing syphilis early and at the time of the first visit to the clinic.

It is of interest to note the various types of secondary syphilis which were seen. In the seven cases seen in men, two had papules of the palms and soles and one of these also had a mild generalized alopecia; two had a generalized macular rash; one a maculopapular rash of the trunk and genitalia with mucous patches in the mouth; and one a generalized papular rash with a large annular lesion the size of a dime on the upper lip. The seventh patient, a colored male, had umbilicated, papular syphilids scattered on the face, back, arms, and thighs and, in addition, a

huge, bilateral, inguinal lymphadenopathy. Seven of the women with secondary syphilis presented macular rashes, of which four were completely generalized over the body; three patients had only scattered papules; and eleven had labial or perineal condylomata lata. One of the latter had a few scattered lesions on the arm, back and neck, which resembled psoriasis. One colored woman had typical umbilicated, papular syphilids on the face and chest, in addition to papules on the palms and soles.

The general physical condition of all patients was good. Only one had a serious complication. This patient, a female, gave the history of an abdominal mass which had been found inoperable five years previously and for which she had received considerable x-ray therapy. Two patients had a mild hypertension, probably on an arteriosclerotic basis since both were over fifty years of age. One woman gave a history of previous pelvic inflammatory disease. Other physical findings were minor, such as chronic enlargement of the tonsils or external hemorrhoids. Chest plates were made of each patient treated; only one showed some prominence of the aortic knob and the others were normal. Six of the forty-one patients were suffering with an additional venereal disease at the time of treatment, namely, gonorrhea. No lymphopathia venereum or chancroid was seen in these cases. No effort was made to treat the gonorrhea at the time the syphilis was being treated.

PREPARATION FOR TREATMENT

Every effort was made to start treatment as early as possible, and in many instances it was instituted within twenty-four hours of the first clinic visit. Several patients were admitted at once when the diagnosis was made by the darkfield examination and were not discharged until the completion of treatment. However, two days were allowed in most cases to prepare the patient for treatment.

Preparation for treatment consisted of the following: A darkfield examination of infectious lesions; a careful and detailed history not only of the present illness, but also of the patient's past, family, and social history; an epidemiologic history; a thorough, general, physical examination with special attention to the location of the primary lesion and the location and type of all secondary lesions; an x-ray examination of the chest; a routine electrocardiogram; the drawing of sufficient blood so that one specimen could be sent to the Iowa State Hygienic Laboratory for Wassermann, Kahn and Kline tests, and one to the University of Michigan for quantitative Kahn and standard Kahn tests; a complete blood count, including a differential and platelet count; blood chemistry studies, which included an icteric index, urea nitrogen, bilirubin and van den Bergh test; and a complete urinalysis and the determination of the presence of urobilin in the urine.

Active treatment occupied eight to twelve hours each day. The solution was prepared by dissolving 120 milligrams of mapharsen in 1,000 cubic centimeters of 5 per cent glucose in normal saline commercially prepared for intravenous use. After a Murphy drip set was attached to the flask, it was suspended for administration of the solution by gravity. A twenty gauge one and one-half inch needle was inserted into a forearm vein. The arm was usually supported on an arm board (the right and left arms were used on alternate days) and the needle was securely anchored and left in place until the entire treatment for the day had been completed. Two such flasks of glucose in saline, each containing 120 milligrams of mapharsen, were given daily for five consecutive days; thus the daily dosage was 240 milligrams of mapharsen in 2,000 cubic centimeters of fluid, and the total dosage for the five days was 1,200 milligrams of mapharsen given in 10 liters of fluid.

The Murphy drip was regulated so that the fluid was allowed to flow at the rate of forty to fifty drops per minute the first day and sixty drops per minute the last four days. It was found unwise to let the solution enter the vein too rapidly because of an increased nausea and in some cases, vomiting. Any incidental arm pain could be relieved by temporarily speeding up the rate of flow.

During the patient's treatment hours a special nurse was in constant attendance. The temperature, pulse and respiration were recorded every thirty minutes. A general diet was given which was especially high in carbohydrates, either solid, semisolid or liquid, as desired. If food was not tolerated well during the treatment hours, a late evening meal was always given. The patient was allowed to be up and around in the room in the evening after completion of the day's treatment.

A complete blood count with differential count and a complete urinalysis with urobilin test were made daily; a platelet count and icteric index were done every other day. Immediately preceding treatment on the third day, a blood specimen was drawn for serologic examination.

After five consecutive days of treatment, the patient was kept in the hospital for rest and observation for a two day period, which made a total of eight or, at the most, ten days of hospitalization. During the two days of observation, an-

other physical examination was made, the blood count and platelet count were rechecked, and the urea nitrogen, icteric index, van der Bergh and bilirubin determinations were repeated. Urinalysis, serologic tests, spinal fluid examination (which included a cell count), total protein determination, and spinal fluid Wassermann and gold curve were also carried out. It was noted that immediately following treatment some patients developed a secondary fever accompanied by a rash (toxicoderma) which was always mild and disappeared within twenty-four to forty-eight hours.

FOLLOW-UP OBSERVATIONS

The effectiveness and safety of the five-day method of treatment can be established only after a large number of patients has been observed for at least five years. Many patients will be observed for a longer period and others will be lost from observation before the five years have passed. Efforts are made to examine the patients once a week for the first month, once a month through six months, then at nine months, twelve months, twice a year until five years have elapsed, and annually thereafter.

Serologic changes can be followed easily during and after treatment. With each visit blood specimens are obtained and sent to both Iowa and Michigan laboratories. Each time the patient returns, he is examined to make sure he has not suffered an infectious relapse or reinfection. His skin is examined for signs of dermatitis, and special attention is paid to the kidneys, liver, heart, and central nervous system. The weight is recorded each time and any changes in general health are noted. During the first four visits after treatment, the routine laboratory work—a complete blood count, blood chemical tests, and urinalysis—is repeated.

TABLE II
Length of Post-Treatment Observation of Forty-one Cases

Period	Cases Held to Period	
	Number	Per Cent
Total Cases	41	100.0
Discharge	41	100.0
Discharge—1 Month	41	100.0
1- 2 Months	40	97.6
2- 3 Months	40	97.6
3- 4 Months	37	90.2
4- 5 Months	36	87.8
5- 6 Months	32	78.0
6-12 Months	31	75.6
12-18 Months	21	51.2
18-23 Months	11	26.8
24 Months	1	2.4

Table II shows the length of post-treatment observation of the forty-one cases treated up to July, 1942. Five patients have been lost from active observation; two are in the army, and the addresses of two are such that follow-up examinations in their new locations could not be arranged. The fifth patient is lost for follow-up observation.

REACTIONS

"Can a patient tolerate so intensive a treatment over such a short time?" is a question frequently asked. All reactions have been tabulated and carefully studied. Table III shows the percentage of total patients treated up to July 1, 1942, who exhibited specified treatment reactions. As shown in the table, one of the most common reactions among the forty-one patients treated was the primary or first day fever which occurred in twenty-one (51.2 per cent) of the patients. A temperature above 100 degrees has been commonly considered a primary fever. Although the temperature varied from 100 to 105 degrees and rarely went above 103 degrees, it usually rose slowly and reached a peak by the end of the sixth hour of treatment. In all cases the temperature was normal by the morning of the second day of treatment, usually having fallen at about the same rate at which the elevation took place. Occasionally a slight elevation of temperature occurred on the second and third day. Of the forty-one cases treated, the highest primary fevers were seen among patients suffering from primary syphilis. If a secondary rash was present, it usually became much more marked during the temperature rise, which is a true Herxheimer reaction.

TABLE III
Per Cent of Total Patients (41) Exhibiting Specified Treatment Reactions

Reaction	Number	Per Cent
Pain in Arm	36	87.8
Nausea and Vomiting	24	58.5
Primary Fever	21	51.2
Secondary Fever	10	24.4
Cerebral, Mild	10	24.4
Serious	0	0.0
Convulsions	0	0.0
Toxicoderma	2	4.9
Renal Damage	0	0.0
Liver Damage	0	0.0
Clinical Jaundice	0	0.0
Exfoliative Dermatitis	0	0.0
Neuritis, Motor	0	0.0
Sensory only	2	4.9
Blood Dyscrasias	0	0.0
Fatalities	0	0.0

A secondary fever is defined as one which occurs on the last day of treatment and which might last during the two days of hospital observation, gradually falling to normal; it may or may not be accompanied by a toxicodermic rash. The secondary fever does not rise as high as the primary fever, but its duration is longer and its fall to normal is more gradual, sometimes requiring forty-eight hours. Of the ten patients (24.4 per cent) who experienced a secondary fever, only

two had a toxicoderma (4.9 per cent). The toxicodermic rash is a generalized eruption in which the maculae soon coalesce to an erythema which rapidly disappears, usually lasting not longer than forty-eight hours. The rash is asymptomatic and without exfoliation.

Thirty-six patients (87.8 per cent) experienced arm pain at some time during treatment. Twenty-four patients (58.5 per cent) experienced some nausea and vomiting at some time during treatment, usually on the first day. Only three patients, all of whom were women, experienced severe vomiting.

None of the patients showed evidence of permanent renal damage. In eleven patients a trace of albumin was found on only one occasion during the period of treatment or during the first month of observation; none showed casts in the urine; and blood chemical tests were always within normal limits.

A slight rise in the icteric index was noted in several instances, but many times it was lower when the patient was discharged from the hospital than upon admission. In all patients there was some increase in the amount of urobilin in the urine, but in none was there any sign of clinical jaundice. The van den Bergh tests were consistently negative.

It was interesting to note that none of the patients treated showed signs of generalized exfoliative dermatitis, one of the most feared of all antisyphilitic treatment reactions.

Two patients (4.9 per cent) experienced neuritis. This was not motor in type but sensory,

TABLE IV

Results of Blood Serologic Tests in a Series of Thirty-nine Cases of Early Syphilis Following Treatment by the Five-day Intensive Intravenous Drip Method

Diagnosis	Cases Treated	Completion of Treatment			1 to 4 weeks			4 weeks to 2 months			2 to 3 months		
		Total	Negative		Total	Negative		Total	Negative		Total	Negative	
			Number	Per Cent		Number	Per Cent		Number	Per Cent		Number	Per Cent
Seronegative Primary	8	8	4	50.0	8	7	87.5	8	8	100.0	6	6	100 0
Seropositive Primary	8	8	0	0.0	8	3	37 5	8	4	50.0	8	6	75.0
Secondary	23	23	0	0.0	23	1	4.3	22	2	9.1	21	6	28.6

TABLE IV—Continued

Diagnosis	Cases Treated	3 to 6 months			6 months to 1 year			1 year to 18 months			18 months plus		
		Total	Negative		Total	Negative		Total	Negative		Total	Negative	
			Number	Per Cent		Number	Per Cent		Number	Per Cent		Number	Per Cent
Seronegative Primary	8	5	5	100.0	4	4	100.0	3	3	100.0	3	3	100.0
Seropositive Primary	8	7	6	85.7	4	4	100.0	2	2	100.0	2	2	100 0
Secondary	23	19	12	63.2	13	8	61.5	7	6	85.7	7	6	85.7

consisting of numbness and tingling of the arm, and disappeared a few days after the treatment had been completed.

None of the patients showed signs of blood dyscrasias. Red and white blood counts remained normal throughout. In three patients a white count below 4,500 was recorded only once. Platelet counts were normal except in one instance in which the counts were consistently low. There were no signs of aplastic anemia or agranulocytosis. The cerebral complications were mild, consisting only of headaches. Ten patients (24.4 per cent) complained of headache at some time during treatment.

There were no fatalities in the cases treated at Broadlawns Hospital.

SEROLOGIC OBSERVATIONS

In Table IV results of the blood serologic tests are outlined by diagnosis. Many of the patients have necessarily been followed for a limited length of time, hence the figures will be altered in the next five years and will be of more conclusive value at that time.

Of the eight patients with seronegative primary syphilis who were treated, only four were negative upon completion of treatment. The others became partially positive during the five-day treatment period; however, by the end of the first month, seven of the eight were completely negative and all were negative by the end of the second month. Five of the eight were examined at six months and had remained completely negative; four were followed up at twelve months and had negative serology; three were followed for over eighteen months and were serologically negative; one patient was followed for two years and had negative serology.

Eight patients with seropositive primary syphilis were treated. Their serologic reactions did not alter during the treatment period; however, three of the eight had completely negative serology at the end of four weeks. Seven patients were followed for six months, four of whom were negative serologically by the end of the second month and six by the end of six months; four were followed for a year and all were serologically negative; two patients were followed over eighteen months and remained negative; one patient was followed longer than six months and his serology failed to become negative.

Twenty-three patients with secondary syphilis with lesions of varying duration were treated; one became serologically negative during the first month of follow-up. Nineteen patients were followed for six months, two of whom were serologically negative by the end of the second month, six by the end of the third month, and twelve by the end of the sixth month. Thirteen patients were observed for twelve months and eight were negative serologically; seven patients were followed for over eighteen months and six were serologically negative.

The serologic reversals were not as rapid in secondary as in primary syphilis and not as rapid in seropositive primary syphilis as in seronegative syphilis. This illustrates the importance of early diagnosis and treatment.

Of the forty-one patients treated by the five-day intensive intravenous drip method, thirty-two were followed from six to eighteen months. In twenty-four patients (75.0 per cent) satisfactory results were obtained in that the patients became clinically well and serologically negative. In six patients (18.8 per cent) the results are pending since the serologic examinations show some residual reagin. The remaining two patients (6.3 per cent) were considered treatment failures; both had a serologic relapse, which was accompanied in one by an infectious relapse.

TABLE V

Time at Which Twenty-eight Patients First Attained Seronegative Status

Period	Seronegative Primary		Seropositive Primary		Secondary	
	Cases	Cumulative Per Cent of Total	Cases	Cumulative Per Cent of Total	Cases	Cumulative Per Cent of Total
Admission—1 week	4	50 0	0	0 0	0	0 0
1 week-2 weeks	1	62 5	1	14 3	0	0 0
2 weeks-3 weeks	2	87 5	2	42 9	0	0 0
3 weeks-4 weeks	0	87 5	0	42 9	1	7 7
4 weeks-2 months	1	100 0	1	57 1	1	15 4
2 months-4 months			3	100 0	5	53 8
4 months-6 months					5	92 3
6 months-1 year					1	100 0
Total	8	100 0	7	100 0	13	100.0

Table V shows the time at which twenty-eight of the forty-one cases first attained seronegativity. The table shows again the more rapid development of a seronegative status in seronegative primary syphilis and the better results obtained by treating seropositive primary syphilis as compared with treating secondary syphilis. Attention is called to the fact, however, that one patient with secondary syphilis became completely seronegative sometime between six months and a year after treatment.

In the two patients in whom serologic relapse occurred, a second five-day course of treatment was given. One patient, a girl sixteen years of age who had late secondary syphilis with condylomata lata, was first treated in August, 1940. Her serology showed improvement up to October, 1940.

At that time she had a negative Wassermann and three quantitative Kahn units. One month later her serology was completely positive and there were 40 quantitative Kahn units. The following month the quantitative Kahn units had risen to 80. She was retreated in February, 1941, and has shown serologic improvement since.

The second patient had both a serologic and an infectious relapse. She was a colored girl nineteen years of age with a maculopapular rash and condylomata. She was first treated in August, 1941. At that time serologic tests were completely positive with 160 quantitative Kahn units. Three months later the Wassermann test was negative, the Kline doubtful, and the presumptive Kahn positive. At six months the serology was completely positive with 20 quantitative Kahn units, and at nine months the quantitative Kahn units had increased to 40. Upon examination at the clinic she was found to have annular pigmented lesions with raised borders on each forearm. These had been present for over two months and she gave a history of having had smaller similar lesions on her chest. There was no evidence of genital lesions. Darkfield examinations of the skin lesions were negative. She was retreated in July, 1942, with no serious reactions; the ultimate result is pending.

There was one patient in the series with a "probable" reinfection. This patient fulfilled the "criteria of probable reinfection" as outlined by the Cooperative Clinical Group.[2] These criteria are: (1) Indisputable first infection; (2) Clinically and serologically negative examinations for one year after treatment; (3) Second chancre in (a) different site, and (b) different lymph drainage from first; (4) No signs of activity at site of first chancre; (5) Positive darkfield examination on second chancre; (6) Satellite adenopathy present, second chancre; (7) If the blood Wassermann reaction becomes positive under observation; or (8) If a secondary eruption appears at the proper interval, laxity will be allowed in items 2, 3b, and 6. The patient was a white man thirty years of age who had a darkfield positive chancre on the glans penis in August, 1940. His serology was positive and showed 4 quantitative Kahn units when discharged from the hospital at completion of treatment. The serology reversed rapidly and was completely negative by the end of the second week. For the next sixteen months the patient remained serologically negative and clinically well. On June 29, 1942, the patient came to the clinic with the history that a penile lesion had begun to appear two weeks before and had gradually increased in size and become ulcerated. The lesion, which was located on the foreskin near the junction with the corona, was red, edematous, and ulcerated in two places. Darkfield examination was positive and the inguinal nodes were enlarged. The serology was completely negative, however, except for a presumptive positive Kahn reaction. The original lesion on the glans was well healed. The patient was next seen four days later at which time the lesion had increased in size and was again darkfield positive. Five days after that the patient entered the hospital for treatment by the five-day intensive intravenous drip method. His serology had become completely positive with 20 quantitative Kahn units and a third darkfield examination showed typical Spirochaeta pallida. The patient took treatment well with no serious reactions. His spinal fluid was negative and he was improving when discharged from the hospital. A sexual contact was named by the patient, but was not recent enough to be considered as the infectious source. She proved to be serologically negative. No infectious source could be obtained which would have made the case an indisputable reinfection.

SPINAL FLUID STUDIES

The treatment of patients by the intensive five-day intravenous drip method offers a golden opportunity for spinal fluid examination in early syphilis. Lumbar punctures were done in thirty-eight of the forty-one cases, but permission was refused by two patients. The other lumbar puncture was a bloody tap and unsuitable for testing. Cell counts and total proteins were normal in all cases. Only one of the thirty-eight patients examined had a positive spinal fluid Wassermann. The gold curve was 4554200000. Two weeks later this patient's spinal fluid was again examined and the Wassermann and gold curve were both negative.

PREGNANCIES

Two of the women treated by the five-day method were pregnant. One was at term and had secondary syphilis with darkfield positive perineal condylomata lata. The other was only two months pregnant and had early, latent syphilis. The first patient had a questionably viable child at the time treatment was started. She tolerated the five days of treatment well and the condylomata healed rapidly. There was x-ray evidence of fetal death and thirty-six hours after the patient was discharged from the hospital she was readmitted and delivered of a macerated fetus. Autopsy of the child showed negative pathology for syphilis. The fetal long bones were normal on x-ray examination. The blood serology of the

infant was partially positive. Arsenic was not found in the placental tissues. The evidence indicated that the fetus was dead before treatment was begun and that its death was not a result of treatment.

The other pregnant patient progressed well during pregnancy and gave birth to a normal child at term. The baby has had two negative serologic tests since delivery. The child will be followed the same as any child born to a mother with syphilis. The end result in the mother is pending, since she had a partially positive serology over one year after treatment.

PUBLIC HEALTH ASPECTS

One of the outstanding values of the five-day intensive intravenous drip method of treating syphilis has been from the public health aspect. Patients with infectious syphilis have been taken out of community life at once and eight to ten days later have not only completed their full course of treatment, but have become noninfectious. No other method of treatment has succeeded in holding all patients to completion of their full course of treatment. While the patients were in the hospital, an opportunity was presented to win their confidence and to educate them in regard to the disease. As a result, more contacts were secured and located. The group of forty-one patients mentioned sixty-five contacts—forty-two of which were located and examined and twenty-four were found to have syphilis. Ten of the twenty-four contacts showed syphilis in the early, infectious stage.

SUMMARY

1. Forty-one patients with early syphilis were treated by the intensive five-day intravenous drip method between July, 1940, and July, 1942. Eight had seronegative primary syphilis, eight seropositive primary syphilis, twenty-three secondary syphilis, and two early, latent syphilis.

2. Darkfield examinations were positive in twenty-seven of the forty-one patients treated.

3. Treatment was started as early as possible after the diagnosis and careful preliminary laboratory studies had been made. The patients received treatment for five days and were observed for two to three additional days before being discharged from the hospital. All laboratory work was repeated before discharge.

4. Each patient was given 240 milligrams of mapharsen in 2,000 cubic centimeters of 5 per cent glucose in normal saline over an eight to twelve hour period daily for five consecutive days.

5. There have been no severe reactions such as generalized exfoliative dermatitis or hemorrhagic encephalitis in the treatment of forty-one patients with early syphilis by the method described. Twenty-one patients had a primary fever, ten a secondary fever, and two a toxicodermic rash. There were no blood dyscrasias, no instances of renal or liver damage, and no fatalities. Thirty-six of the patients experienced arm pain and twenty-four had nausea and vomiting at some time during treatment.

6. In order to evaluate propertly the effectiveness of the five-day intensive intravenous drip method of treating early syphilis, the patients must be followed for at least five years or longer. To date, thirty-two patients have been followed from six to eighteen months with 75 per cent satisfactory results, 18.8 per cent pending, and 6.3 per cent failures. The patients with seronegative primary syphilis reached a negative status rapidly. Those with seropositive primary syphilis showed more rapid serologic reversals than did those with secondary syphilis. Serology in secondary syphilis became negative between one and six months.

7. Only two of the forty-one patients treated had a proved serologic relapse and were retreated by the same method. One of these patients also had an infectious relapse.

8. One patient with probable reinfection was retreated.

9. One patient out of thirty-eight had a positive spinal fluid serology after completion of treatment. Two weeks later the spinal fluid serology was negative.

10. Two women were treated during pregnancy without adverse results.

11. This method of treatment has a definite public health value.

CONCLUSIONS

A preliminary report of forty-one patients with early syphilis treated by the five-day intensive intravenous drip method at Broadlawns General Hospital has been presented. Although sufficient time has not elapsed to permit definite conclusions regarding the effectiveness and safety of the method, its advantages in the treatment of early syphilis (primary and secondary only) are obvious.

This method of therapy should not be employed except in institutions where facilities are adequate for treatment and follow-up work.

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THE PSYCHOPATHIC HOSPITAL OUTPATIENT CLINIC

Paul E. Huston, M.D., Iowa City*

In the twenty-two years since its opening in 1920, the Psychopathic Hospital has admitted approximately 6,600 patients for study and treatment. During this period over 19,000 patients have been examined in the outpatient clinic. Although the clinic functions as an integral part of the hospital, many of its activities are different from those of the hospital itself. It is the purpose of this paper to discuss the work of the clinic in order that physicians in the state may understand its operation and use its facilities when desired.

The work of the clinic may be divided into five principal activities: (a) to determine suitability for admission to the hospital; (b) to give consultations requested by physicians, schools, social agencies, courts, and others for diagnosis, management, and therapy of the patient; (c) to advise concerning the management of the patient before he is transported to the hospital; (d) to treat outpatient cases; and (e) to teach psychiatry to medical students and interns.

TYPES OF CASES ADMITTED

When the state legislature established the hospital, there was the wise provision in its charter that the hospital was to fulfill three major functions: teaching, research, and treatment. The hospital was not intended to be a custodial institution for those patients who suffer chronically from mental illness. In accordance with these three functions, no appointments for direct admission to the hospital are made but every patient is examined first in the outpatient clinic to determine suitability for admission. The clinic functions as the admitting service for the hospital. For teaching purposes it is the aim to have in the hospital, at any given time, cases which present as many of the different psychiatric disorders as possible so that medical students and interns may have a varied experience. Cases which are diagnostic problems also make good teaching material. Since the research interests of the staff change from time to time, certain types of cases which are suitable for the particular research problems involved may be admitted in preference to other cases which do not fit into the research program. Also, the type of case admitted for treatment varies as new treatments become available. An example of this is the greater admission rate of depressions in the past few years because of the efficacy of metrazol and electric shock therapy in such cases. It has been a consistent policy to admit every psychoneurotic patient who seemed to be a relatively good therapeutic prospect. The Psychopathic Hospital is the only public institution in the state where persons who are suffering from a psychoneurosis, and whose financial means are limited, can secure adequate treatment.

APPOINTMENTS AND TEMPORARY MANAGEMENT

Patients are seen in the clinic by appointment only. Appointments are secured by telephone or letter to the admitting physician at the hospital. Usually it is possible to give an outpatient appointment two or three days after a request is received. Appointments for possible admission to the hospital take longer, usually one to two weeks for men and two to four weeks for women, the latter being longer since there always are more requests for the admission of women. The primary factor which causes delay in admission appointments is the small capacity of the hospital, which has but forty beds for psychotic patients and twenty beds for nonpsychotic patients. There are approximately 2,000 new admissions to the four state mental hospitals each year. Consequently, the Psychopathic Hospital usually has a waiting list. In requesting an outpatient examination as against an "admission if suitable" appointment, the general rule which should guide the referring physician is whether or not the patient's condition is serious enough to warrant hospitalization. There are, of course, many circumstances in which admission to the hospital is not even contemplated by the referring doctor. He may merely wish a diagnosis or recommendations regarding the management of the patient, or he may believe that the patient more properly belongs in an institution for the care of chronic conditions and, therefore, desires only a confirmation of this opinion. Because the waiting list frequently precludes immediate admission, many physicians have adopted the practice of sending patients for advice regarding temporary management until they can be admitted to the hospital. Another practice commonly followed is that in which the physician calls the hospital for such advice. There are two types of patients about whom such advice is sought most frequently. These are the suicidal or potentially suicidal patients, and the excited, overactive, and belligerent patients. As a rule the suicidal patient cannot injure himself if someone is constantly with him and if it is impossible for him to obtain sharp instruments, guns, ropes, belts, or poisons. It is better to confine such patients to the ground floors of buildings to prevent suicidal attempts by jumping. Excited patients must also have an attendant. Their overactivity may be con-

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trolled by the use of sedation, the drug of choice being paraldehyde by mouth or by rectum, and by the use of wet or dry packs. Packs are contraindicated in cardiovascular disease, arteriosclerosis, paresis, alcoholic psychoses, brain tumor, and general systemic infectious illnesses. It should be emphasized that the excited patient who is continuously excited is uncommon; therefore, sedation or packs should be used only when necessary. An attempt to understand the cause of the patient's excitement by an understanding physician, attendant, or relative, and the allaying of fears and panics will often do much to calm the patient. Restraint usually makes an excited patient more excited. If he is placed in a room where he can move about freely, his excitement usually subsides. General hospitals should have a seclusion room where excited patients could be managed without sedation or packs. In both depressions and excitements the patient's nutritional status should be watched carefully. Dehydration usually leads to an accentuation of the psychotic symptoms and makes the patient prone to upper respiratory infections. If the patient will not eat for any reason, tube-feeding should be used. Advice given recently by Coburn[1] is valuable regarding the transportation of patients to the hospital. It should be remembered that an adequate psychiatric examination cannot be done when a patient is heavily sedated. It is better, therefore, to have the patient free from sedation when he arrives at the clinic.

PSYCHOPATHIC HOSPITAL PAPERS

There is sometimes an unfortunate delay at the clinic when a patient arrives without the proper Psychopathic Hospital commitment papers. All psychotic patients—private, part-pay, or public—must have commitment papers signed by a judge, if they are to be admitted. Otherwise the hospital has no legal right to detain them. Depressed patients frequently refuse the opportunity for admission on the ground that nothing can be done for them, whereas actually most of these patients leave the hospital markedly improved or recovered. Paranoid patients often will not enter because they fear persecution; manic patients rarely have insight into the fact that they are ill. Likewise, all part-pay and public nonpsychotic patients must have papers in order to prove they are eligible for state aid. The papers should be sent to the hospital in advance of the patient to make certain they are in proper order. The only patient who may enter without papers is the nonpsychotic patient who signs a statement requesting admission and who pays the full legal charge for his care. Commitment papers may be secured from the clerk of court in each county. On the other hand, no papers are necessary for an outpatient examination only. A fee is charged patients who are able to pay for this service.

THE ACTUAL OPERATION OF THE CLINIC

The patient should arrive on the scheduled day, together with his relatives or other escorts who are responsible for him if he is not admitted to the hospital. It is desirable, in every case, that the relatives or someone who has known the patient intimately over a period of years, preferably for his entire life, be at the clinic to give a history of the present illness, of the patient's development, and his personality. This history is of such importance that many times a correct diagnosis cannot be determined without it. Psychiatric illnesses are diseases of the personality and its relationship to other persons. Much depends, therefore, upon an accurate description of the change which has taken place in the patient's personality as a result of his illness.

Because most of our patients come from considerable distances, sometimes as much as four hundred miles, a rather unique system has been developed using the experience of previous years as a guide. An effort is made to gather as much information as possible about a patient on the afternoon of his visit. A physician sees the patient, performs a mental status examination and also physical and neurologic examinations. Meanwhile a social worker, trained especially in taking histories of psychiatric illnesses, interviews the informants and secures the history of the present illness, the family history, the past personal development, and a description of the premorbid personality. If, in the examination of the patient or from the social history, a question arises concerning the intellectual level of the patient as having a bearing upon his illness or upon the recommendations to be made, a psychometric test is done by a psychologist. Also, special psychometric examinations may be done when there is a suspicion of intellectual deterioration due to organic causes such as in presenile and senile psychoses of paresis. If a convulsive disorder may be present, an electroencephalogram is made. If a bromide intoxication is suspected, the laboratory is prepared to report blood bromide levels. Also, reports on nonprotein nitrogen, blood sugar, and routine blood and urine studies are available shortly after collection. Where there is important systemic pathology, a consultation from the relevant clinic in the general hospital is obtained and, if necessary, x-ray examinations of the skull, chest, or other parts of the body are made. All of this information is placed in the hands of the psychiatrist who examined the patient and a decision is reached

regarding his admittance to the hospital. If the patient has come for an outpatient examination only, a conference is held with the relatives regarding the disposition. An abstract of the outpatient record is sent to the referring physician not later than the next day on patients not admitted to the hospital. This plan permits the patient and his relatives to return to their homes on the day of the examination and gives the referring physician a report shortly thereafter. If admission to the hospital is recommended, specific instructions for temporary management are given to the relatives and the physician until a bed becomes available.

OUTPATIENT TREATMENT

Another activity of the clinic is that of continued outpatient treatment. Most of the cases treated fall into two diagnostic groups: behavior problem children and psychoneurotic patients. After a child has been examined in the clinic and it is decided that he would profit from therapy without hospital care, arrangements are made to place him in a boarding home in or around Iowa City. The supervision of the general adjustment of the child to his foster parents, to school, and to his daily activities is under the direction of the social service department. The child reports to the hospital at specified intervals for treatment by the psychiatrists. This plan also is followed with many children who were inpatients for whom it is believed hospitalization is no longer necessary but who can be treated as outpatients. Many psychoneurotic patients are treated in this way also, some supporting themselves by working in Iowa City. Likewise, many adult psychotic patients who have been hospitalized, but who need a period of convalescent care, are supervised by the clinic after discharge. There were 316 return visits by the above types of patients during the year 1941.

TEACHING OF INTERNS AND MEDICAL STUDENTS

A final function of the clinic is that of teaching medical students and interns. At the present time the students spend four afternoons in the clinic during their senior year when they serve as clinical clerks in the hospital. Although this experience is shorter than might be desired, it does afford an opportunity for them to observe the cases which are not admitted to the hospital and which are often more like the type they will encounter in general practice.

In their year of service at the University Hospitals, the interns rotate through the Psychopathic Hospital, staying on this service five weeks. They work in the clinic three afternoons a week under close supervision of the senior staff. It is our belief that interns who have had this experience are better qualified for general practice or whatever specialty they may practice later.

A TYPICAL YEAR

It may be of interest to indicate the types of cases seen in the clinic, the referring sources, and the disposition of these cases. The year 1941 was selected as a representative year during which 1,191 cases were examined. Table I shows the sources of referral.

TABLE I—SOURCES OF REFERRAL

New Cases	
Private Physicians	491
University Hospital Physicians	453
Social Service Agencies, Schools, Institutions, Courts	199
Self Referrals	48
Total	1,191

Of these 1,191 patients, 376 were admitted to the hospital. In only 80 of the 1,191 cases was state or private mental hospital care recommended, indicating that physicians and others are sending us relatively early cases, and many types other than those who are psychotic. Parenthetically, it is of interest also that of the 376 patients admitted to the hospital, only 80 were untreatable or did not respond to treatment sufficiently so that institutional care was required. This bears out the fact, which is well known to psychiatrists but not so widely appreciated by the profession at large, that under proper management most psychiatric illnesses have a relatively good prognosis.

The total number of 1,191 new patients seen has been subdivided according to diagnostic categories in Table II. This table has been abbreviated, and liberties were taken with the official diagnostic nomenclature to give a general survey of the major conditions seen. It may be seen from Table II that only about 30 per cent of the cases were psychotic. Of the involutional and manic-depressive psychoses, 101 or about 30 per cent of the 345 were depressions. This contrasts with a

TABLE II—NEW CASES BY DIAGNOSTIC GROUPS

Psychotic Cases:	
Schizophrenia	85
Manic-Depressive	82
Involutional	69
Senile	16
Arteriosclerotic	18
Paranoid	16
Due to Drugs	15
Due to Disturbances in Circulation	18
All Others	26
Total	345
Nonpsychotic Cases:	
Psychoneuroses	230
Simple Adult Maladjustment	49
Psychopathic Personality	74
Primary Behavior Disorders of Children	75
Mental Deficiency	139
No Psychiatric Condition	72
Undiagnosed Condition	43
Diagnosis Deferred	64
All Others	100
Total	846

percentage of 15 in the country at large, and emphasizes a fact often noted by psychiatrists that depressions are more common in rural than in urban areas. Attention is called to the figure of 72 for no psychiatric condition; this represents largely a variety of physical conditions in which the referring physician felt emotional factors were complicating some physical illness and interfering with the therapy. Here the psychiatrists failed to confirm the referring physician's impression of the importance of the emotional factors. Many knotty diagnostic problems were encountered in the categories of undiagnosed condition and diagnosis deferred. Often not enough information could be gathered in one clinic visit to make a diagnosis; but more often diagnosis was difficult because of the complicated and unusual nature of the cases. As psychiatric knowledge progresses, it is hoped that diagnoses will become more adequate. The "all others" group included such cases as alcoholism, drug addiction, migraine, menopausal syndrome, and epilepsy.

A FUTURE NEED

Between the years 1923 and 1940, nearly one billion dollars was spent by the taxpayers for compensation and care of the psychiatric casualties of World War I. Figures from World War II indicate that about 30 per cent of all the casualties arriving from the war zones are psychiatric.[2] Physicians in Iowa will see many of these cases after the present conflict is over. The Psychopathic Hospital stands ready to assist physicians with psychiatric problems presented by our ex-servicemen. It is probable that there will be a necessity for an expansion of the clinic facilities to take care of this new load and to ameliorate the heavy postwar burdens.

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THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

MULTIPLE PRIMARY MALIGNANT TUMORS

F. P. McNAMARA, M.D., Dubuque

Multiple primary malignancies have long ceased to be pathologic curiosities but usually are not diagnosed by clinicians. Probably they are more common than generally recognized. Warren and Gates[1] state that American statistics indicate an incidence of 3.9 per cent of all malignancies. In their series of 1,078 cancer cases coming to necropsy the incidence was 3.7 per cent. They suggest that these cases indicate a predisposition or susceptibility to cancer in certain persons or exposure to some influence favoring the development of cancer. Because they expressed the hope that such cases be reported, we are adding the following cases to those which have been listed previously. It is believed that each case fulfills the criteria of Warren and Gates regarding multiple primary malignancy.

In our series of 909 necropsies there were 220 instances of malignant disease (24.2 per cent). Of these there were six instances of multiple malignancy (2.7 per cent), a figure somewhat lower than the national incidence but which is of little significance since the series is so small. There was also one case which did not come to necropsy, but in which the histology of each tumor was distinctive.

CASE REPORT I (Necropsy 28)

The patient, a white man sixty-nine years of age, died as the result of a carcinoma of the prostate gland with metastases to the pelvic bones, generalized arteriosclerosis, and septicemia. He had had a squamous cell carcinoma of the lower lip three years before death which was cured by radium therapy. Incidentally, he had had a polyp of the rectum removed in a Chicago hospital about six months before death. This was considered benign but the tendency for such lesions to become malignant is well known.

CASE REPORT II (Necropsy 76)

The patient, a white woman sixty-four years of age, died as the result of a spongioblastoma of the right internal capsule. She had had the left breast amputated (radical Halsted operation) sixteen years previously for a medullary carcinoma of the breast.

CASE REPORT III (Necropsy 236)

The patient, a white man eighty-four years of age, died as the result of an adenocarcinoma of the pyloric end of the stomach with regional metastases and bronchopneumonia. He also had a considerable part of the lower lip replaced by a squamous cell carcinoma. There were numerous senile keratoses about the face and backs of the hands but no definite malignancy of the skin was found.

CASE REPORT IV (Necropsy 816)

The patient, a white woman forty-two years of age, died unexpectedly after a short illness which was thought to be cardiac disease complicated by

pneumonia. Twenty months prior to this she had had hysterectomy performed because of a large uterine myoma, which on histologic examination proved to be a fibrosarcoma. She remained well for nineteen months when she was treated for intestinal obstruction which was relieved by enemas, dietary restrictions, and by the administration of pituitrin. A month later while at work she developed a hacking cough, became cyanotic and dyspneic, but did not seem very ill. Without much change in the symptoms and physical signs which indicated a failing heart, she died on the eighth day after the onset of the symptoms. At necropsy sarcomatous metastases were found in each lung, the liver, and on the peritoneum. The most notable feature was a metastatic mass filling the left auricle, which explained the cardiac symptoms. It was attached to the wall of the auricle by a narrow pedicle and was composed of spindle cells. In addition to the sarcoma, there was a typical adenocarcinoma of the sigmoid with extension to the serosa, which evidently was the cause of the intestinal obstruction one month previous to death.

CASE REPORT V (Necropsy 842)

The patient, a white man seventy-four years of age, died primarily of coronary heart disease. At necropsy a bronchogenic adenocarcinoma was found in the right lower main bronchus. There was a single malignant polyp (adenocarcinoma) in the ascending colon. About ten years before death a lesion of the cheek thought to be a cancer had been treated with carbon dioxide snow in Chicago, but no microscopic studies were made. This was the only case in the series in which without specific questioning there was a history of cancer in the family. This patient's mother had died of carcinoma of the stomach.

CASE REPORT VI (Necropsy 866)

The patient, a white woman sixty-seven years of age, died of a carcinoma of the pancreas, obstruction of the bile duct with jaundice, invasion of the duodenum with massive hemorrhage, and metastases to the regional, hilic and retroperitoneal lymph as well as to the liver and right adrenal gland. Eight years before death she had had an adenocarcinoma of one ovary removed in a Chicago hospital. The operation was followed by radium and x-ray therapy, and there had been no evidence of recurrence. The carcinoma of the head of the pancreas was found at the time of an exploratory operation seven months before death. The possibility of this being an example of Krukenburg's tumor of the ovary was considered, but the histology of each tumor is distinctive. There was no history of cancer in the family.

CASE REPORT VII (Hospital No. 43568)

The patient, a white woman fifty-nine years of age, was first admitted to Finley Hospital because of a bone sarcoma of the tibia which was treated by amputation of the leg. Roentgenologically and histologically, it was of the osteolytic type of osteogenic sarcoma. She was well for several months but then was readmitted because of uterine bleeding and the presence of a pelvic mass. On vaginal examination and biopsy, this was found to be a typical squamous cell carcinoma of the uterine cervix. The patient died about six months after the first admission but a necropsy was denied.

COMMENT

In each of these cases the malignant tumors were of different systems as indicated in Table I.

An analysis of the clinical records gives little indication that heredity was a factor in the above group since in only one instance was there a history of another member of a family having a malignant tumor (Case V). It should be realized, however, that most of the histories were obtained by practitioners not especially interested in this phase of the cancer problem. Perhaps if more attention had been given to the family history more cases of cancer might have been brought to light. Also, with one exception, there was no known factor or factors which seemed to favor the development of malignant disease, except possibly smoking in the two cases of carcinoma of the lip and the one case of carcinoma of a bronchus (Cases I, III and V, respectively). All except one of the patients were advanced in years and some factor concerned with or resulting from the process of aging may be of etiologic importance.

TABLE I

Case	Age	Sex	Lesion	Organ	Lesion	Organ
I	69	Male	Carcinoma	Prostate	Squamous cell carcinoma	Lip
II	64	Female	Carcinoma	Breast	Spongioblastoma	Brain
III	84	Male	Adenocarcinoma	Stomach	Squamous cell carcinoma	Lip
IV	42	Female	Fibrosarcoma	Uterus	Adenocarcinoma	Sigmoid
V	74	Male	Adenocarcinoma	Bronchus	Adenocarcinoma	Colon
VI	67	Female	Adenocarcinoma	Ovary	Carcinoma	Pancreas
VII	59	Female	Osteogenic sarcoma	Tibia	Squamous cell carcinoma	Uterus

In only one instance (Case IV) was there an indication that an unusual susceptibility or a predisposition to malignancy might be present. Sarcoma of the uterus is a comparatively rare neoplasm and to be associated with an adenocarcinoma of the sigmoid at the age of forty-two would seem unique. Unfortunately, it was impossible to obtain a family history since there were no living relatives from whom it could be obtained.

Because of the recent and complete studies by Warren and Gates, it will be unnecessary to review the literature, but some of their conclusions will be given. In their review they found records of 1,259 verified cases of multiple malignancy, and also 39 which they were unable to verify. In an analysis of their own 1,078 cancer necropsies they found an incidence of 3.7 per cent, which was essentially that of American statistics as a whole in which the frequency was 3.9 per cent. They concluded that multiple cancers occur more frequently than can be explained on the basis of chance alone. While they believe this may be explained by a predisposition or susceptibility to cancer in certain persons, or the action of some factor favoring the development of malignancy, they state that the nature of the predisposition is unknown. Probably more definite conclusions will be reached only by more intensive clinical studies of cancer cases with especial investigations in all cases of family histories of malignancy.

REFERENCE

1. Warren, Shields, and Gates, Olive: Multiple primary malignant tumors; a survey of the literature and a statistical study. Am. Jour. Cancer, xvi:1358-1414 (November) 1932.

INTERNATIONAL COLLEGE OF SURGEONS TO MEET IN JUNE

The Fourth International Assembly of the International College of Surgeons will be held June 14, 15, and 16 at the Waldorf Astoria Hotel in New York City. The program will be devoted to war surgery and rehabilitation and will include papers by eminent authorities and continuous roundtable discussions on war surgery, rehabilitation, care of veterans, and allied subjects.

Delegations made up of prominent surgeons from the United Nations, in addition to those from other countries, are expected to attend. The United Nations' representatives will give outstanding examples of the progress being made in war surgery and rehabilitation under battle conditions by their respective countries.

The medical profession is cordially invited to attend.

SPEAKERS BUREAU ACTIVITIES

Marshall County Medical Society

Benjamin M. Levin, M.D., Assistant Professor of Pediatrics at the University of Illinois, College of Medicine in Chicago, will address the members of the Marshall County Medical Society at their meeting Tuesday evening, June 1. The topic of Dr. Levin's discussion will be Pediatrics in General Practice.

Dinner will be served at the Hotel Tallcorn in Marshalltown at six-thirty o'clock, and all physicians in the vicinity of Marshalltown are most cordially invited to attend.

Taylor County Medical Society

A meeting of the Taylor County Medical Society will be held at Hotel Lenox in Lenox Tuesday evening, June 8, at seven o'clock. The program will consist of a film on Pernicious Anemia by William P. Murphy, M.D., of Boston, Massachusetts. Members of the society will participate in a discussion following the presentation of the film.

Hardin County Medical Society

Verl A. Ruth, M.D., of Des Moines, will present an address on The Treatment of Fractures in Ambulatory Patients before the members of the Hardin County Medical Society, Tuesday evening, June 1. The dinner meeting will be held at the Princess Cafe in Iowa Falls at six-thirty o'clock.

RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.
WOI—Wednesdays at 2:05 p. m.

June 7- 9	Health on the Farm Front	George M. DeYoung, M.D.
June 14-16	Typhoid Fever	Chester L. Putnam, M.D.
June 21-23	Summer Skin Disorders	Edward J. Ringrose, M.D.
June 28-30	Obesity	Byron M. Biersborn, M.D.

The House of Delegates of the American Medical Association will convene in Chicago at the Palmer House beginning June 7.

State Department of Health

Walter L. Bierring

Modern Aspects of Sanitation

An article published in a recent issue of the *American Journal of Public Health* discusses sanitation as related to medicine and certain infectious diseases in a manner of special interest to the attending physician. The paper, entitled "The Present Epidemiological Basis of Environmental Sanitation," was prepared by Gaylord W. Anderson, M.D., Dr. P. H., Professor and Head of the Department of Preventive Medicine and Public Health at the University of Minnesota,[1] and was presented at a joint session of the Engineering and Health Officers Sections of the American Public Health Association at the seventy-first annual meeting in St. Louis, Missouri, October 29, 1942. The following paragraphs are quoted from the paper:

DEVELOPMENT OF MODERN SANITATION

"Environmental sanitation is the oldest form of public health endeavor. To it can be attributed the reduction in cholera and typhoid fever, much of the reduction in summer diarrheas, control of many of the milk- and food-borne infections, elimination of yellow fever from certain areas, progress in malaria control, forward steps in elimination of industrial hazards—in short, some of the outstanding accomplishments of public health workers.

"That sanitation should be the foundation upon which the modern superstructure of public health has been erected was the inevitable result of the evolution of concepts of infectious disease. As our predecessors conceived these to be due to inhalation of toxic emanations from decaying filth, early public health attention was logically directed at cleanliness of the environment. The advent of the era of bacteriology made possible the separation of the program into two components, the one with a specific disease prevention value, the other with mere esthetic value. It was thus possible to concentrate on those aspects that had health significance, rather than dissipate energies in attempts to attain mere cleanliness. . . .

COMMUNITY CLEANLINESS

"Although I am in hearty accord with attempts to eliminate useless procedures, such as some of our ridiculous and almost barbaric quarantine requirements, I nonetheless submit that complete disregard of the esthetic aspects of environmental sanitation is not only illogical but even detrimental to public health progress. Many of these esthetic components have contributed immeasurably to our standard of living. The cleanliness of a community's streets, parks, food handling establishments and public buildings, including the public toilets, is a true measure of its standard of living. If we neglect these, we sink into a neglect of measures of greater importance. The standard of living is a vital factor in community health, important in the decline of many diseases, notably tuberculosis and infant diarrheas. I do not wish to belabor the point, nor have I time to be more specific. I do, however, wish to emphasize that in attempting to place environmental sanitation on a sound epidemiological basis we must not so completely lose sight of the intangible esthetic aspects that what we today consider progress through elimination of nonessentials is revealed tomorrow as a backward step. . . .

EPIDEMIOLOGY DEFINED

"I conceive of epidemiology as the science of the occurrence of disease. It embraces consideration of all factors bearing on the development and prevalence of any disease condition. We must, therefore, examine the extent to which disease in the individual or the community may be influenced by the environment. Entire volumes

have been written on only small parts of this broad topic. Here I may direct attention to only a few salient points.

WATER SUPPLIES

"Improvement in water supplies needs no justification. There is ample evidence of the relationship between specific contamination and intestinal infection. . . .

MAY POLIOMYELITIS BE WATER-BORNE?

"The possible rôle of water in the development of other diseases is important to the engineer and epidemiologist alike. Discovery of the virus of poliomyelitis in the excreta of patients and carriers, and in the sewage of a community in which the disease is prevalent, naturally raises the suggestion that the disease is water-borne, and that added attention may have to be given to purification of water and disposal of sewage.

"It should be pointed out, however, that the mere presence of micro-organisms in feces does not mean that the normal mode of spread is via water to which sewage finds access. The organisms of tuberculosis and pneumonia may be found in feces and yet there is no evidence that either disease is spread by water that we drink or in which we swim.

"Before we can assume the spread of poliomyelitis through water, we must show the occurrence of the disease to be consistent with such a hypothesis. It is to be regretted that too little attention has been paid to the wave-like character of spread, a phenomenon pointed out so clearly by the late Dr. Wade H. Frost as long ago as 1916. . . . Personally I am aware of no outbreak of poliomyelitis in which the epidemiological evidence even suggests water as a vector to the exclusion of other channels of infection; on the other hand, I am familiar with innumerable outbreaks in which the water-borne hypothesis is absolutely untenable. . . .

BATHING PLACES

"The problem of waste disposal, and particularly contamination of bathing places, offers another situation in which we must fall back upon esthetics for support of current practices. . . . I have heard many accusations as to the spread of disease through swimming, yet for none of these can I find evidence that is even presumptive. Respiratory diseases have been spread at beaches and pools, yet I see no evidence that this has been through water rather than direct respiratory exchange. Skin infections may well be spread through exchange of towels and bathing suits and conceivably by lying on a moist, sandy spot recently vacated by a sufferer from such infection. I would not deny this possibility or even probability, but no one has suggested disinfection of the sand though many have urged disinfection of the water to prevent spread of impetigo. Some have even suggested that venereal diseases might be spread through the waters of bathing beaches. I would not deny that these diseases have been spread at the beaches but I insist that it is not through the medium of water. Sanitation of swimming pools and beaches is a matter of such obvious common decency that it needs no support from far-fetched epidemiology. Unfortunately epidemiological experience cannot even assist in the determination of reasonable standards.

INDUSTRIAL HYGIENE

"Industrial hygiene has probably made more progress than any other branch of environmental sanitation in its attempt to base control practices on a sound epidemiological foundation. Tolerances for specific chemicals have served as the basis for standards of concentrations to be permitted in the working environment. The fact that a dust-free or fume-free atmosphere was neither attainable nor essential has been faced realistically and control efforts directed at reducing concentrations below the critical levels determined by experience. . . ."

REFERENCE

1. Anderson, Gaylord W.: The present epidemiological basis of environmental sanitation. Am. Jour. Puh. Health, xxxiii:113-119 (February) 1943.

PREVALENCE OF DISEASE

Disease	Apr. '43	Mar. '43	Apr. '42	Most Cases Reported From
Diphtheria	14	8	30	For the State
Scarlet Fever	340	367	240	Boone, Monona, Polk, Woodbury
Typhoid Fever	2	3	3	Fayette, Johnson
Smallpox	4	3	4	Boone, Butler, Dubuque, Wright
Measles	1230	1657	1356	Black Hawk, Dallas, Des Moines, Washington, Woodhury
Whooping Cough	140	112	104	Des Moines, Duhuque, Washington, Woodbury, Black Hawk, Boone
Brucellosis	36	39	16	For the State
Chickenpox	251	469	464	Black Hawk, Boone, Des Moines, Duhuque, Mahaska
German Measles	1261	888	18	Boone, Des Moines, Duhuque
Influenza	6	11	12	Clayton
Meningitis	15	4	1	Black Hawk, Emmet, Jackson, Johnson, Linn, Mahaska, Polk
Mumps	517	567	750	Boone, Des Moines, Story, Webster, Woodhury
Pneumonia	38	91	227	Clinton
Poliomyelitis	0	1	0	None
Tuberculosis	46	62	19	For the State
Tularemia	0	0	0	None
Gonorrhea	147	141	138	For the State
Syphilis	250	218	249	For the State

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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Dennis H. Kelly, Associate Editor.....Des Moines

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SUBSCRIPTION $3.00 PER YEAR

Address all communications to the Editor of the Journal, 505 Bankers Trust Building, Des Moines

Office of Publication, Des Moines, Iowa

Vol. XXXIII JUNE, 1943 No. 6

ANNUAL MEETING A SUCCESS

Any misgivings we may have had beforehand concerning the success of the state meeting under war conditions were completely dissipated by mid-morning of the first day. If anything, the interest, enthusiasm, and attendance at the various features were greater this year than at many other peacetime sessions we have attended.

A total registration of 804 persons was recorded. Of these, 546 were members of the Iowa State Medical Society. Considering that 713 Iowa doctors are in military service, it must be admitted that this was indeed an excellent showing. Furthermore, it vindicates thoroughly the judgment of those who voted to hold the annual meeting even if war restrictions did present obstacles. Eighty guests were present, most of whom were physicians. Several doctors stationed at nearby military establishments were registered in this group. The Woman's Auxiliary had a total enrollment of 121, and there were 57 exhibitors registered.

All in all, there were few differences to be observed this year in the general appearances of the meeting over those of previous years. There was about the same congestion outside the meeting halls where groups gathered to greet one another and to catch up on exchanges of experiences since the last meeting. The commercial exhibitors were present in their usual numbers, and it appeared that many physicians were taking advantage of the opportunity offered to inspect the latest in medical supplies and equipment.

One notable difference this year over previous years was the much greater proportion of military uniforms present. It was gratifying indeed that so many of these men were able to get back for the meeting.

Officially, the annual session this year was designated as a two-day session, but in reality it opened the day before when twenty-six of our stalwarts gathered at the Golf and Country Club for the annual golf tournament. We are informed that the hooks, slices, grounders, and fly balls which emanated from the various shot-makers were a sight to behold. However, when the dust was all laid and the totals were added up, John Deering of Onawa was found to be the champion, closely followed by Edward Emerson of Muscatine. All of the players received a prize and most of them two. Officers for next year are George A. May of Des Moines, president, and Edward L. Emerson of Muscatine, secretary.

The scientific sessions were all well attended. Acknowledgment should be made here of the Society's indebtedness to its guest speakers who so generously gave of their time to come to Des Moines to bring the latest in medical and surgical knowledge. All the addresses will be published in later editions of the Journal so that none of them need be singled out here for special comment.

In the House of Delegates two actions of particular importance were taken. The first was the adoption of the committee's report directing the President to appoint an interim committee to meet with Hospital Service, Inc., for a discussion of the proposed changes in policy recommended by the latter. The second was the endorsement of a resolution to be presented to the House of Delegates of the American Medical Association at its meeting in Chicago in June in conjunction with the delegates from the Minnesota State Medical Society to the effect that a national committee on medical service be formulated. The details of this resolution will be presented in the July issue of the Journal, and by that time the action of the House of Delegates of the American Medical Association will also be known.

Dr. M. C. Hennessy of Council Bluffs was unanimously elected President-Elect of the Society, and Des Moines was selected as the meeting place again in 1944.

FURTHER EVIDENCE OF TOXICITY FROM SULFONAMIDE DRUGS

That acute hemolytic anemia, acute agranulocytosis, and leukemoid reactions may follow the use of the sulfonamide drugs has become well established. Now, Kracke and Townsend report in the May 15 issue of the *Journal of the American Medical Association* that the blood platelets may also be affected. They record two cases of their own in which this occurred and cite ten other cases from the literature. Their first patient was a woman forty years of age who re-

ceived only 16 grams of sulfathiazole in three days. In addition to ecchymotic areas and petechial hemorrhages over the trunk, extremities, and face, blood was vomited and tarry stools were passed. Blood smears examined before medication was begun showed platelets present in normal amount. However, when the blood was again examined for platelets after the onset of the purpura they were found to be extremely few and were estimated to be less than 5,000 per cubic millimeter. The second case was that of a woman twenty-three years of age who had received 10 grams of sulfathiazole over a period of two days for a sore throat. She also developed a thrombopenic purpura as well as hematuria and kidney blockage. Both patients died.

The authors then conducted daily platelet estimations on sixty-one patients being treated with sulfathiazole. The results of this study indicate that there is a slight platelet depression on the first day of treatment and a rather decided increase of platelets on the first day after cessation of treatment.

Thus, once again we are reminded that the use of sulfonamide drugs is not without risk of serious and even fatal consequences, and that when they are used it is imperative that patients be observed most carefully for possible deleterious effects.

ANNOUNCEMENT OF PHYSICIAN'S HANDBOOK ON RHEUMATIC FEVER

RHEUMATIC FEVER IN CHILDREN—ITS RECOGNITION AND MANAGEMENT, a 32-page clinical handbook written for the practicing physician, has just been released by the Metropolitan Life Insurance Company. It assembles under one cover the modern concepts of the disease, its nature, diagnosis and prognosis, and the individual and community problems involved in the care of the patient. A group of distinguished clinicians and the following organizations assisted in its preparation: the American Heart Association, the American Academy of Pediatrics, the Children's Bureau of the United States Department of Labor and the United States Public Health Service. Other educational material has been developed by the Company in connection with its national program to reach the general public and the medical profession with information on this disease.

Single copies of the handbook are being made available to physicians, without charge, chiefly through the 16,000 field representatives of the Metropolitan Life Insurance Company. Physicians who wish a copy, and who have not secured one by June 1, should write to Dr. George M. Wheatley, Assistant Medical Director, Metropolitan Life Insurance Company, 1 Madison Avenue, New York, N. Y.

The JOURNAL is happy to add its word of endorsement to the above announcement. We have read the handbook and in our judgment it is a most excellent statement of present-day knowledge concerning this disease. We believe all physicians will find it most helpful.

We should also like to call attention to the significance of a large business concern like the Metropolitan Life Insurance Company, in conjunction with other nationally known organizations, embarking upon this program of study of what we believe to be, in many respects, the nation's number one health problem. Other crippling diseases such as poliomyelitis have received much more of the public's attention, due largely to the fact that the crippling effects are more obvious, but from the viewpoint of morbidity and mortality rates, rheumatic heart disease is far more disastrous. In fact, it heads the list as the cause of death in children between the ages of ten and fourteen, inclusive. That interest in this serious disease is being taken on so large a scale, as is indicated by the Metropolitan Life Insurance Company's announcement, is most encouraging, and we urge each of our readers whose work brings him in contact with rheumatic fever to cooperate wholeheartedly in this worthwhile program.

STATEMENTS CONCERNING PROCUREMENT OF MORE PHYSICIANS TO MEET NATION'S MILITARY AND CIVILIAN NEEDS

Following are statements pertaining to the procurement of physicians to meet the nation's military and civilian needs, prepared by the surgeons general of the Army, Navy, and United States Public Health Service, and the chairman of the Directing Board of the Procurement and Assignment Service for Physicians, Dentists, and Veterinarians. Read these statements carefully and then reflect upon their contents. Four states have not met their 1942 quotas. Iowa is not among them, but the failure of some areas in the country to provide their quotas of physicians for the armed forces reflects unfortunately on all of American medicine. The question may well be asked, "Is American medicine incapable of making the sacrifices required of it without compulsion?" One inescapable fact must be faced—our fighting men, and those who must remain behind, must and will have medical care. It will be obtained one way or another. The choice of methods is still in medicine's hands. The medical profession of this country never has failed the nation, and it must not do so now!

Statement of the Surgeon General of the United States Army

The Army is increasing in size; more medical officers are required. New units are being formed and

many new general hospitals are under construction at many points in the United States. Some basic training must be given to medical officers before they are assigned to purely medico-military duties; for this reason, they are needed one or two months prior to actual assignment. For the protection of the health of the civilian population, the quotas for physicians must be fairly distributed throughout the country. Certain states are far behind; they will, it is hoped, do everything possible to furnish their quotas at once.

Statement of the Surgeon General of the United States Navy

In order to plan intelligently I have reviewed the personnel situation in the Medical Department of the Navy. There is a deficit of approximately nine hundred medical officers for the next six months, based on minimal requirements. The Bureau of Medicine and Surgery calls medical officers to active duty when billets are available, and does not build up too large a Reserve at any time. Consequently, procurement must go on in an orderly fashion, if we are to meet the demands that will be placed upon us as the offensive fighting develops. We can not afford to have the deficit increase beyond its present level; if it does we will not be able to give first-class medical service to our wounded.

The Medical Department of the Navy is charged with maintaining the health of all the personnel of the Navy and the Marine Corps; in addition it must care for the dependents of the officers and men. We look to the medical profession of our nation to come forward with the available doctors that can be spared from civil life to aid in our military necessity. In the main, the profession has responded nobly. There are some localities where this is not so. In those localities the medical profession should cause the pressure of public opinion to bear on all eligible doctors and thereby bring to their attention the seriousness of failing to do their patriotic duty.

The medical profession is faced with a challenge of furnishing medical service to the Armed Forces and to the civil population during the active state of war and in the postwar period, which we hope is not too far distant. Should the profession fail in either regard many forces may develop that will destroy the practice of medicine as we know it. This would be disastrous and it is something that we can not afford to allow to come about. In all seriousness, the doctors of medicine in the United States should take stock carefully of their own immediate situations and should give every assistance in planning to see that medicine plays its responsible part in this and coming years.

Statement of the Surgeon General of the United States Public Health Service

During the next twelve months, the Public Health Service will require approximately 600 medical officers for full-time active duty in the reserve commissioned corps. These physicians will be recruited on an average of 50 a month—25 for service in the United States Coast Guard, and 25 for general service.

In addition to the medical officers assigned to the Coast Guard, physicians are needed for duty in the Marine Hospitals and the medical program of the War Shipping Administration, as well as for detail to general public health work in state and local health departments, and for such specialized war programs of the Public Health Service as tuberculosis control, venereal disease control, industrial hygiene, and community medical services.

The Service also expects this year to commission some 5,000 physicians in the inactive reserve. These doctors will be available for active duty in the event of acute emergency in their own or nearby communities. They will not be called for active duty unless an acute emergency exists, and will be retained only for the duration of such an emergency. This recruitment of inactive officers is undertaken as a part of the cooperative program of the Public Health Service and the Office of Civilian Defense.

The needs of state and local health departments for physicians have increased greatly during the past year. In January, 1942, it was estimated that state and local health departments would need 600 physicians. As of January, 1943, the exact needs have not been determined, but the Public Health Service has, at the present time, requests from the states for 185 medical officers to be assigned to duty in war areas alone.

According to reports from State Procurement and Assignment chairmen, as of March 23, 1943, 286 additional doctors for civilian practice are needed in 176 counties located in 38 states. Another 22 counties in the same states report a shortage of physicians but do not specify the numbers needed. In the remaining 10 states, no needs were reported.

These 198 counties reporting immediate needs represent only 7 per cent of the 2,654 counties in the 38 states, and only 6 per cent of all counties in the country. Nevertheless, it is apparent that civilian communities are feeling the pinch of the physician-shortage increasingly, since experience has shown that local needs become acute before they are expressed in formal reports. In the joint studies made in 42 areas by the Public Health Service and the Procurement and Assignment Service, it has been determined that 59 physicians and 5 dentists, or 64 medical and dental personnel, are needed in these areas—an average of 1.5 per study. The Public Health Service has been requested to supply 13 of these physicians and dentists, or 23 per cent of the determined need.

On the basis of these 42 studies, it is estimated that 500 physicians and dentists will be needed in 332 areas to be surveyed in the next coming fourteen months, or by June 1, 1944. It is anticipated that 80 per cent of these, or 400, will be supplied by voluntary relocation through the regular channels of Procurement and Assignment, and that the Public Health Service will be requested to assist in meeting

the needs for the remaining 20 per cent, or 100 physicians and dentists. This may be done either through financial assistance to physicians desiring to relocate in areas requiring their services, or through assignment of Public Health Service personnel upon request of the proper authorities.

Although it is impossible to project with accuracy the 1943 needs of civilian communities, we must face the fact that the shortage undoubtedly will increase during and after the filling of the 1943 military quotas; and that the chances of meeting civilian needs as well as replacing physicians who die or withdraw from practice because of disability, will correspondingly decrease. Furthermore, we cannot predict at this time the possible needs of certain rural areas, which now may be adequately supplied but which will require additional public health and medical services during 1943, should the government move a large number of farm families into these areas for the food production drive. It is believed that joint action of the Public Health Service and the Procurement and Assignment Service will serve to meet urgent needs in civilian communities.

Statement of Chairman, Directing Board Procurement and Assignment Service for Physicians, Dentists and Veterinarians

Figures are now complete on the 1942 quotas for supplying physicians of the various states. Forty states have exceeded the 100 per cent figure of their quotas. Five states were above 90 per cent of their quotas. Four states — New York, Connecticut, Massachusetts, and Nevada—were below 90 per cent of their quotas.

Nevada is the lowest state, but has a total quota of but 35 doctors. It has provided 23 and deserves special consideration because its population is thinly scattered over wide areas.

This statement would not imply any reflection on the patriotism of those members of the medical profession who have been marked available by the Procurement and Assignment Service in these three states and who have not sought a commission. I would only present the facts and let each one draw from these facts whatever deductions he individually chooses.

Certain unavoidable considerations must be faced in these figures. Four states failed to provide 90 per cent of their 1942 quotas of doctors for the services. Three of these states—New York, Connecticut, and Massachusetts—are Eastern Seaboard states and among the most populous ones in the Union. These populous states have large cities in them which now have more doctors per thousand persons than most other parts of the country. Largely because those doctors marked available by the Procurement and Assignment Service have not sought commissions, these states are below their quotas.

Unless more of the doctors found available for military service by the Procurement and Assignment Service in these cities apply for a commission in the armed forces with reasonable promptness, still more doctors must come from rural communities. This will greatly complicate the problem for those communities in their own and other states since many rural communities are already none too well supplied with doctors. Such inequalities in medical service as now exist are in a considerable measure the result of the conditions herein stated and cause occasional problems of rural medical care which become practically insurmountable for the Procurement and Assignment Service with its present limited authority. With all these facts in mind, with the responsibility of medicine to the country and to itself such as it is, the quota figures particularly in New York, Connecticut, and Massachusetts should be brought up to par by an intensive effort of the state medical societies through their executive bodies, preferably by an organized state medical society campaign.

The provision of doctors for the armed forces is not only the special obligation of medicine but a responsibility which it acknowledges and accepts as its part in the war effort. Each state that has not met its 1942 quota will be kept informed of its position in relation to its quota and its position in relation to other states. Otherwise, a state is denied the pardonable pride of satisfaction in meeting its quota or pampered against facing a distasteful position in relation to other states.

RECOMMENDATIONS FOR A VENEREAL DISEASE CONTROL PROGRAM IN INDUSTRY

The following abstract has been received from Otis L. Anderson, M.D., Surgeon and Chairman of the Advisory Committee on the Control of Venereal Diseases to the United States Public Health Service. The JOURNAL is pleased to cooperate in the objective by publishing this report.

In order to assemble current authoritative information and to formulate basic principles applicable to a program of venereal disease control in industry, the Surgeon General has appointed an Advisory Committee to the United States Public Health Service. This Committee has outlined the objectives of such a program as:

A. Medical and Public Health
   1. To find and refer for proper medical management all cases of venereal diseases among workers in industry.
   2. To establish equitable policies for the employment of applicants and continuation of services of employees who have venereal diseases.
   3. To coordinate the community and industrial venereal disease control program.

B. Employee
   1. To improve the physical condition of employees.
   2. To reduce the number of workdays lost through illness or injury.
   3. To provide job placement.
   4. To prolong and increase the earning power of employees.

C. Employer
   1. To reduce compensation costs.
   2. To lessen work interruptions and labor turnover.
   3. To enhance production by increasing the efficiency of workers.
   4. To minimize personnel problems.

In order to assure agreement on all phases of fundamental policy, the committee recommends that certain agencies be consulted in carrying out this program: the state labor department, industrial commission or similar department of state government; the appropriate committee of the state medical society; the association representing employers; the labor organizations; appropriate voluntary health and welfare associations.

Responsibility for the administration of the program should be shared by the industrial hygiene and venereal disease divisions of the state health department. The program should not be inaugurated without a complete education program. The employee should be convinced that adequate treatment protects both his health and his ability to earn a living, and the employer that not all cases of venereal disease are infectious, through an educational program before venereal disease control measures are introduced.

In order that the control program may be effective, preemployment examinations should be mandatory for all workers. Laboratory tests for syphilis and gonorrhea should be made a part of the periodic, reemployment or "return from illness" physical examinations which are the policy of the industry. The interval between examinations should under no circumstances be more than three years.

It is of utmost importance that the results of the medical examination be considered confidential between the worker and the medical staff. Information should be furnished to others only with the consent of the individual concerned or, failing this, on legal advice. The medical staff should make proper recommendations to the management as to the physical fitness of the employee for work. When the usual clinical record is kept in an open file, venereal disease forms should be filed in the medical departments for the use of the medical staff only.

There is no reason for denying employment to an applicant or for discharging an employee because an examination has revealed evidence of syphilis or gonorrhea, provided:

1. That the employee agrees to place himself under competent medical management;

2. That, if the disease is in the infectious stage, employment should be delayed or interrupted until such time as a noninfectious state is established through treatment and open lesions are healed;

3. That when syphilis exists in a latent stage, employment should not be delayed or interrupted;

4. That employment may be deferred or denied when the individual is an industrial hazard;

5. That occupational readjustments of employees be made of individuals developing disabling manifestations;

6. That workers with syphilis in any of its stages be excluded from areas where there is exposure to chemicals which may produce toxic reactions, and those having cardiovascular syphilis or neurosyphilis should not be exposed to physiologic stresses;

7. That workers with gonorrhea should be allowed to work only under special medical observation during the administration of sulfonamide drugs.

The applicant or the employee whose examination reveals evidence of a venereal disease should be called to the industrial physician's office for a conference. He should be instructed as to the nature of the disease which he has in order that he may cooperate intelligently with the requirements of the program. He should be referred to a reputable source for medical attention and be furnished with a letter directed to his physician stating the results of the examination and what is expected of the employee as to regularity of treatment if he is to be employed. The industrial physician should receive a record of treatment at about monthly intervals. The names of individuals who have neglected or refused treatment should be turned over to the health department for appropriate action in bringing them back to treatment.

The plant physician making a tentative diagnosis of communicable syphilis or gonorrhea should without delay acquaint the appropriate health authority with the facts.

THE VALUE OF CANCER EDUCATION

In a discussion before the Council and the Cancer Committee of the Iowa State Medical Society, certain statistics were cited by Dr. F. P. McNamara as evidence of the value of the cancer educational program of the Iowa Division of the Women's Field Army. The figures were taken from a recent report on the annual number of deaths from cancer in the ninety-nine counties

in Iowa compiled by the Division of Cancer Control, Iowa State Department of Health, for the years 1936 to 1941, inclusive. In his presentation Dr. McNamara contrasted certain counties in which the activities of the Women's Field Army had been given reasonable support with those counties and districts where the program had received little or no support.

In Iowa as a whole the number of cancer deaths rose from 3,371 to 3,532 in the five year period, a gain of 161 or 4.5 per cent. The figures for 1936 and for 1941 of the five counties chosen for having developed the cancer program fairly well are as follows:

	1936	1941
Dubuque	100	89
Johnson	72	46
Pottawattamie	93	82
Woodbury	123	119
Linn	113	129
Total	501	465

It will be noted that in these counties the number of cancer deaths decreased 36, a loss of 7.1 per cent during the five year period.

The statistics for the five counties in which the cancer program has been neglected or only slightly developed are:

	1936	1941
Polk	213	290
Scott	119	146
Clinton	73	65
Black Hawk	74	83
Cerro Gordo	43	60
Total	522	644

In this group cancer deaths rose 122, a gain of 23.3 per cent. Furthermore, this group of five counties accounted for 75 per cent of the total increase in the cancer mortality rate in Iowa.

While these statistics are obviously open to the criticism that too short a period is represented to be conclusive, it may be assumed that in the absence of some other modifying factor, that the contrasting statistics for the two groups of counties are due to the educational program of the Women's Field Army. Certainly it seems that the trend of the cancer mortality rate is downward in the counties where cancer education has been developed and upward where it has been neglected.

It can be concluded, therefore, that every county in Iowa should insist upon developing the cancer educational program of the Women's Field Army to the highest possible degree of usefulness. While there are obstacles to be overcome before this can be accomplished, an alert, progressive profession should be able to do so.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

Meeting of the Council and Cancer Committee

April 29, 1943

A joint meeting of the large Cancer Committee of the Iowa State Medical Society was held with the Executive Board of the Iowa Division of the Women's Field Army Thursday, April 29, 1943, in Parlor A at the Hotel Fort Des Moines. Members of the Council, the Executive Cancer Committee, the Executive Board of the Women's Field Army, and Dr. E. G. Zimmerer of the State Department of Health were present.

Following a thorough discussion of the difficulties and misunderstandings with the American Society for the Control of Cancer and the program in Iowa, it was voted that educational work in cancer, both lay and professional, should be continued, if possible, in cooperation with the American Society for the Control of Cancer. It was also voted to ask the Board of Trustees of the Iowa State Medical Society for authority to revise the Cancer Manual under the direction of the Executive Cancer Committee.

Meeting of the Council

April 30, 1943

The Council of the Iowa State Medical Society met in Parlor A at the Hotel Fort Des Moines at eleven a. m. Friday, April 30, with the following members present: Drs. L. L. Carr, C. H. Cretzmeyer, J. B. Knipe, J. E. Reeder, E. F. Beeh, J. C. Hill, H. A. Householder, C. A. Boice, J. G. Macrae, and R. L. Barnett. Dr. Reeder and Dr. Macrae were reelected chairman and secretary of the Council, respectively; Dr. Hill was reappointed chairman of the Executive Cancer Committee, with Drs. H. W. Morgan of Mason City, F. P. McNamara of Dubuque, A. C. Starry of Sioux City, and A. W. Erskine of Cedar Rapids, the other members; the personnel of the Tuberculosis Committee and Committee on Industrial Health was left unchanged; and Dr. J. B. Priestley was reappointed chairman of the Speakers Bureau Committee, with Drs. T. F. Hersch of Cedar Rapids, W. R. Brock of Sheldon, and James Dunn of Davenport, the other members. Meeting adjourned at eleven-forty a. m.

Meeting of the Board of Trustees

April 30, 1943

The Board of Trustees of the Iowa State Medical Society met in Parlor B at the Hotel Fort Des Moines on Friday, April 30, 1943. Those present were Drs. Oliver J. Fay of Des Moines, John I. Marker of Davenport, and Walter A. Sternberg of Mount Pleasant. Dr. Fay was reelected chairman of the board and given authority to sign routine bills. Necessary expenses of the delegates to the American Medical Association were authorized, as were those of the secretary and executive secretary.

Meeting of the Committtee on Maternal and Child Health

April 29, 1943

The Committee on Maternal and Child Health met in Parlor A in the Hotel Fort Des Moines at one p. m. Thursday, April 29. Dr. Farnsworth called the meeting to order and the program for the wives and families of servicemen was discussed and definite recommendations drawn up to be presented to the House of Delegates that afternoon. Meeting adjourned about two p. m.

PROFESSIONAL CONFIDENCE

The following article was received from one of the doctors in the state with the request that it be published in the Journal:

"'All that may come to my knowledge in the exercise of my profession or outside of my profession or in daily commerce with men, which ought not to be spread abroad, I will keep secret and never reveal.'—(Hippocratic Oath.)

"Recently a patient whom I had been informed that he had syphilis, came to me in much distress of mind. He was to be examined soon for the draft and he feared that his secret might not be kept. On inquiry, I was astonished to learn that not only the doctors but also the lay members of the draft board must be informed of the laboratory reports of blood tests of draftees.

"My patient and his wife meet socially with lay members of the draft board and their wives. I could assure him that he could trust the doctors on the board absolutely, but I could not give him the same assurance regarding the lay members.

"Dr. Jaggard, professor of obstetrics at Northwestern in the old days, told his students to 'regard the information imparted by the patient as sacred.' He would illustrate this by placing a pencil on his desk. 'You know it—that's one. Your patient knows it,' placing another pencil beside the first, 'that's two. Now you tell your wife,' placing another pencil beside the other two, 'Now how many know it?' 'Three,' replied the student. 'No—one hundred and seventeen.'

"I do not think it is either right or necessary for lay members of draft boards to be informed of clinical or laboratory findings in examination of draftees. The medical members alone are qualified to decide the question of physical fitness of draftees and no others should have a voice in it.

"Every medical student is taught that the medical consultation must be held as sacred as the confessional. Ever since Hippocrates, and before, this mutual understanding between the physician and his patient has existed. May we always guard it jealously and keep it inviolate."

GRADUATE COURSE IN ELECTROCARDIOGRAPHY

A full-time, intensive course in electrocardiography will be presented by the Cardiovascular Department of the Michael Reese Hospital in Chicago from August 16 to August 28, 1943, under the directorship of Louis N. Katz, M. D. The course is offered particularly to the general practitioner. There will be sessions on interpretations of electrocardiograms illustrated by lantern slides, and practice by the student with unknown records. Routine records taken during the time of the course will be discussed. Emphasis will be placed on chest leads and on the importance of the electrocardiogram in coronary sclerosis and myocardial infarction. The mechanism and interpretation of heart irregularities will be developed.

Since group and individual instruction will be given, the course is open to both the beginning and advanced student in electrocardiography. It is planned to individualize the course so that at the end of the period each student will be capable of taking and properly interpreting routine electrocardiograms. In order to accomplish this purpose the class will be limited in number; and it is imperative, therefore, that reservations be made early. Further information may be secured from the Michael Reese Hospital, Cardiovascular Department, Twenty-ninth and Ellis Avenue, Chicago, Illinois.

Notice
to
County Society Secretaries

All delinquent dues must be in the Central Office prior to June 10 in order that the names of those physicians may be included in the Membership Roster which will appear in the July issue.

Polk County Plan for Food Rationing to Patients Requiring Special Diets

Editor's Note: The following plan has been set up by a special committee of the Polk County Medical Society which was appointed to develop a guide for physicians in the procedures to be followed in securing increased ration food supplies for their patients. The committee is composed of Dr. Fred Sternagel of West Des Moines and Drs. John T. Strawn and Edwin B. Winnett of Des Moines.

The office of price administration has, as you know, set up a food rationing program in the United States which must be followed by all individuals. This same office has taken under consideration the fact that many persons are ill and that the food program as outlined by them will work a great hardship upon individuals with certain ailments such as diabetes, gastric and duodenal ulcer, irritable colon, underweight, and many other conditions which might require more than rationed allowances of food.

The designation of those persons suffering from disease or dietary deficiencies, who may be entitled by reason of their disabilities to extra rationed foods, has been left entirely to the physician. He is also expected to recommend the amount of rationed foods required for that patient's diet during a two month period.

In Polk County the mechanics of making application for additional allotments of food for these individuals is simple and as follows:

1. Have the patient or a family member obtain from the ration board Form R-315, together with a requisition blank for the physician.
2. The *patient* will complete Form R-315 and he or a family member will take the requisition blank to his physician.
3. The physician will certify on the requisition blank:
   (a) Why or for what diet extra rationed foods are needed.
   (b) Why the patient cannot use unrationed foods.
   (c) The total amount in *pounds* of the different kinds of rationed food needed in the next *two months.*
4. The patient or family member will then return both completed forms to the ration board where the amounts of rationed food required will be changed into points or certificates.

On the first lines of the ration requisition the physician should state briefly the type of diet which is desired for the patient and on the other line give a brief reason why he needs the war rations you are requesting below. Do not send in a case history or complete treatment outline; the board desires to know only how much rationed food your patient needs.

Before filling out the ration requisition for a patient, the physician should consider that circumstances and diets vary greatly among patients and that no two individuals will require the same amount of rationed food. The first duty of the physician is to estimate *in pounds* the total amount of rationed food his patient will require for *two months* and then deduct from that list the proportion of these items which he believes can be substituted from unrationed foods and fresh or home-processed supplies which the patient has available. The final step will be to indicate on the requisition blank the types of rationed food needed and how much in pounds he estimates will be required to supplement the diet adequately for *two months.*

Many foods such as breadstuffs, fresh fruits and vegetables, milk, cream, fish, and eggs, are as yet unrationed and *must not* be considered in the requisition except that they should be substituted in the diet whenever possible.

On the other hand, *canned* fruits and vegetables, sugar, meat, cheese, butter, and fats are almost completely war rationed and the physician will be unable to reduce the requisition in these articles very much.

The physician is expected to state accurately on the requisition the total amount of *war rationed* foods desired for the patient *irrespective of the allowance he would receive as an average individual;* the ration boards will make the necessary computations.

The amount of food required by the patient will vary greatly with individuals even among those with the same disease, because of their occupations, age, weight, and activity. Furthermore, the length of time the patient will be on a diet, the season of year, convenience to markets where fresh, unrationed fruits and vegetables can be purchased, and, of course, the amounts of rationed foods which the patient has available for himself, must all be considered in calculating the patient's individual requirements of strictly rationed supplies. A resourceful, intelligent patient or his wife *can adequately prepare almost any diet without extra war rationed foods* by judiciously choosing unrationed supplies available at present in Iowa.

There are, of course, some cases in which such

a requirement might impose a hardship on a patient or his family, but nevertheless it is possible for everyone, including patients, to get along at present without extra rationed foods.

When the physicians fills out the requisition for extra rationed foods, only a *minimum amount should be asked for that patient* and not enough for the whole family. Should the patient find that the physician has underestimated the amount of rationed food for his diet, he may make application for an additional allowance by exactly the same procedure as that followed for the first application. Ration boards are cooperative, but they have a good idea of what is a reasonable allowance of rationed food and the request for an amount unreasonably excessive may be questioned or even denied.

The foregoing considerations make it impracticable to draw up any specific recommendations for extra ration requirements applicable to a particular group of diets or individuals. The accompanying list for calculating food essentials may prove useful to physicians in determining their patient's requirements of certain articles of rationed foods for a two month period (Table I). Table II outlines reasonable amounts of rationed foods for a two month period for average urban patients suffering from the more common disorders. For reference a copy of Form R-315 is shown. This is the form which the patient must procure from his ration board and fill out himself. Some specimen requisition diets which have been filled out for examples are also shown.

Physicians are urged to be conservative in their recommendations for extra rations and are even *expected to underestimate the patient's needs.* If the patient should find by experience that more rationed food is necessary and can give a good reason for his requiring additional supplies, he can always get more by making another application. Food must be conserved to help win this war or no one will eat.

TABLE I

LIST FOR CALCULATING FOOD ESSENTIALS

Food	Amount per one serving	Required for two months
Canned Fruits	½ cup	15 pounds
Canned Vegetables	½ cup	15 pounds
Sugar	1 teaspoon	1 pound
*Milk, whole	1 cup	15 quarts
*Cream	3 ounces (6 tablespoons)	6 quarts
Butter or Oleomargarine	1 pat or 1 tablespoon	1½ pounds
Meat (as purchased)	3 ounces or 1 serving	12 pounds
Bacon	1 strip	3 pounds

*Not yet rationed and need not be included on requisition.

EXAMPLE

Problem: Mr. Jones requires two small servings of meat a day. How much meat must be requisitioned for two months?

Answer: With one daily serving (see chart) he would require twelve pounds of meat for two months; therefore, for two servings he would require two times twelve pounds of meat or twenty-four pounds in two months.

TABLE II

GUIDE FOR DETERMINING TOTAL TWO MONTH ALLOWANCES OF RATIONED MEATS, FATS AND PROCESSED FRUITS AND VEGETABLES FOR THERAPEUTIC DIETS

		Diabetes	High Protein High Iron Colitis	High Calorie High Vitamin	Ulcer, Bland and Convalescent	Pregnancy	Reduction
PROCESSED (canned, frozen, dried) FRUITS and VEGETABLES	† 3% VEGETABLES—green beans, spinach, tomato juice, tomatoes, asparagus	15 lbs.	11 lbs.		11 lbs.		6 lbs.
	† 9% VEGETABLES—beets, peas, carrots, onions	15 lbs.	11 lbs.		11 lbs.		6 lbs.
	†18% VEGETABLES—lima beans, baked beans, canned corn, kidney beans	Above allowances adequate to permit trading points for this group					
	†12% FRUITS—grapefruit, plums, peaches, pineapple, pears, apricots, cherries	15 lbs.	22 lbs.	22 lbs.	22 lbs.		6 lbs.
MISCELLANEOUS	MEAT or CHEESE	30 lbs.	22 lbs.	22 lbs.	12 lbs.	22 lbs.	32 lbs.
	BACON	6 lbs.	6 lbs.	6 lbs.			
	BUTTER or OLEOMARGARINE	4 lbs.	6 lbs.	8 lbs.	6 lbs.	4 lbs.	3 lbs.
	SUGAR			3 lbs.	3 lbs.		
	*CREAM	8 qts.	30 qts.	15 qts.	30 qts.	7 qts.	
	*MILK, whole	30 qts.	60 qts.	60 qts.	90 qts.	60 qts.	30 qts.

*Not yet rationed and need not be included on requisition.

†Many times these items can be entirely supplied from fresh or home-canned sources.

Note: The average diet under ordinary conditions should not require any more than the above amounts for two months. If experience shows that more is necessary than was requisitioned at first, a supplementary application can be made later.

OPA Form No. R-315
(Revised 12—15—42)

Form approved. Budget Bureau No. 08—R146—42

UNITED STATES OF AMERICA
OFFICE OF PRICE ADMINISTRATION

SPECIAL APPLICATION RATIONED FOOD COMMODITIES

1. Name of applicant:

.....
(Consumer, business, or organization)

2. Address .....
(Number and street or R. F. D.)

.....
(City) (State)

If this application covers establishments other than that named above, list the name and address of each on an attached sheet.

3. *(a)* This application is for.....
(Enter specific food item, such as canned peas, sugar, coffee, etc.)

(b) Action applied for .....

4. Check type of applicant

☐ Consumer. ☐ Institutional user.
☐ Retailer. ☐ Industrial user.
☐ Wholesaler. ☐ Other.

If applicant is *not* a consumer, state nature of business (grocery, restaurant, soda fountain, bakery, ice cream manufacturer, etc.):

.....

5. Amount of item (3 (*a*) above) applied for in points, pounds, or other ration units . . . .
(If application is not for a rationed food item, write "none")

6. Amount of item or commodity group on hand . . . .

(If item is rationed individually such as coffee or sugar, show the amount of that item on hand plus the value of stamps, certificates, and credits exchangeable for that item.)

(If item is one of a rationed group such as processed foods or meats, show total number of points of that whole group on hand plus the point value of stamps, certificates, and credits exchangeable for that group. Inventory statement is not required when application is for other than additional points.)

7. Explain fully why you need this food item, or why you request the action in 3 (*b*):

.....

.....

.....

.....

(Over.—This application must be signed on reverse side)

NOT TO BE FILLED IN BY APPLICANT

Local Board No..... City.....

County..... State.....

Other office.....

Application is:

☐ Denied. Date.....

☐ Granted. Amount.....

Other relief.....

Decision made by: ☐ Local Board.
☐ State or District Office.
☐ Regional Office.
☐ Washington National Office.

This decision made under section .....

of the ..... Rationing Regulations.
(NOTE.—Decision may be made only by Washington National Office, unless Local Board, State or District Office, or regional Office has been authorized to grant or deny relief in cases of this kind.)

.....
(Signature of board member or other official)

Certificates or other authorizations issued:

Serial No.	*Amount in points, pounds, or other units*
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
..... (Date)	..... (Signature of issuing officer)

If repayable, state date due.....

Date repaid .....

Signed for the board.....

Title.....

I HEREBY CERTIFY to the Office of Price Administration, an agency of the United States, that I am the applicant or authorized agent of the applicant and that the statements herein made are true.

NOTICE.—Section 35 (A) of the United States Criminal Code makes it a criminal offense, punishable by a maximum of 10 years' imprisonment, $10,000 fine, or both, to make a false statement or representation as to any matter within the jurisdiction of any Department or Agency of the United States.

Signed.....

Title.....

Acting for.....

To the War Price and Rationing Board:

This is to certify that *James Brown*, *Des Moines, Iowa*, is under my care and needs a special diet† of rationed food because *a high protein and high vitamin diet is required.*

Also this patient cannot use unrationed foods because *most of the foods he requires are too strictly rationed.*

Below is the list of foods and amounts which he (she) needs for the next two months.

Kind of Food	Amount (in pounds)
12% Fruits	*22 pounds*
**Butter or Oleomargarine*	*8 pounds*
**Meat, Cheese*	*22 pounds*
**Bacon*	*6 pounds*
**Sugar*	*3 pounds*

Signed *Fred Williams, M.D.*

†It is sufficient for the physician to state here the type of diet only and not the diagnosis unless he desires to do so.

*Since the average patient has no other source of these foods except through rationed supplies, the full two month requirement should be requested.

Note: Dr. Williams has not included any vegetables since the patient has sufficient vegetables from his garden and from the market. More than the usual requirement of fruits are allowed because in Dr. Williams' opinion Mr. Brown should have nothing but cooked fruits, and he has no home-canned fruits.

To the War Price and Rationing Board:

This is to certify that *Charles White*, *Des Moines, Iowa*, is under my care and needs a special diet† of rationed food because *he needs a lot of bland foods.*

Also this patient cannot use unrationed foods because *the rationed allowances of foods required do not quite meet his needs.*

Below is the list of foods and amounts which he (she) needs for the next two months.

Kind of Food	Amount (in pounds)
12% Fruits	*11 pounds*
**Butter*	*6 pounds*
**Sugar*	*3 pounds*
**Meat*	*22 pounds*

Signed *Henry Hayes, M.D.*

†It is sufficient for the physician to state here the type of diet only and not the diagnosis unless he desires to do so.

*Since the average patient has no other source of these foods except through rationed supplies, the full two month requirement should be requested.

Note: Dr. Hayes has not allowed any vegetables because it is summer and plenty of fresh vegetables are available. He has allowed some fruits, but not too many, for the same reason.

To the War Price and Rationing Board:

This is to certify that *John Doe*, *Des Moines, Iowa*, is under my care and needs a special diet† of rationed food because *of high protein, high fat, and low carbohydrate diet requirements.*

Also this patient cannot use unrationed foods because *the rationed foods requested here are needed to make up his diet.*

Below is the list of foods and amounts which he (she) needs for the next two months.

Kind of Food	Amount (in pounds)
**Butter*	*4 pounds*
**Meat*	*30 pounds*
**Bacon*	*6 pounds*

Signed *John Smith, M.D.*

†It is sufficient for the physician to state here the type of diet only and not the diagnosis unless he desires to do so.

*Since the average patient has no other source of these foods except through rationed supplies, the full two month requirement should be requested.

Note: Dr. Smith has only allowed the above items because Mr. Doe has complained to him that he cannot get enough meat and butter to make up his diet. Mr. Doe stated on inquiry that he had no trouble getting enough fruits and vegetables for the diet so none were allowed.

Roster of Iowa Physicians in Military Service

As of May 22, 1943

Adair County

Cornell, D. D., Greenfield (APO 41, San Francisco, Cal.) .....Capt., A.U.S.
Gantz, A. J., Greenfield (APO Los Angeles, Cal.)..Capt., A.U.S.

Adams County

Willett, W. J., Carbon (Camp Maxey, Tex.).....Capt., A.U.S.

Allamakee County

Hogan, P. W., Waukon
Ivens, M. H., Waukon (Camp Shelby, La.)
Kiesau, M. F., Postville (Fort Leonard Wood, Mo.)
Rominger, C. R., Waukon (Camp Claiborne, La.).....A.U.S.

Appanoose Connty

Condon, F. J., Centerville (Bethesda, Md.)....Major, U.S.P.H.S.
Edwards, R. R., Centerville (Trenton, N. J.).....1st Lt., A.U.S.
Huston, M. D., Centerville (Lowry Field, Colo.)....Capt., A.U.S.

Audubon County

Koehne, F. D., Audubon (Oroville, Wash.)

Benton County

Koontz, L. W., Vinton (Carmel, Cal.).....Capt., A.U.S.
Senfeld, Sidney, Belle Plaine

Black Hawk County

Bickley, D. W., Waterloo (Camp Howze, Texas)....1st Lt., A.U.S.
Bickley, J. W., Waterloo (Fort Sill. Okla.).....1st Lt., A.U.S.
Butts, J. H., Waterloo (Galveston, Texas)...Lt. Comdr., U.S.N.R.
Cooper, C. N., Waterloo (Seattle, Wash.)...Lt. Comdr., U.S.N.R.
Ellyson, C. D., Waterloo (Pensacola, Fla.).....Lt., U.S.N.R.
Hartman, H. J., Waterloo (APO 33, Los Angeles, Cal.) .....Capt., A.U.S.
Henderson, L. J., Cedar Falls (Camp White, Ore.)..Capt., A.U.S.
Hoyt, C. N., Cedar Falls (McClellan Field, Ala.).1st Lt., A.U.S.
Ludwick, A. L., Waterloo (APO 813, New York, N. Y.) .....Capt., A.U.S.
Marquis, F. M., Waterloo (Camp Robinson, Ark.)..Capt., A.U.S.
O'Keefe, P. T., Waterloo (Nashville, Tenn.).....Capt., A.U.S.
Paige, R. T., LaPorte City (Des Moines, Ia.).Lt. Comdr., U.S.N.R.
Rohlf, E. L., Jr., Waterloo (APO New York, N. Y.) .....1st. Lt., A.U.S.
Seibert, C. W., Waterloo (Fort Wright, Wash.) Capt., A.U.S.
Smith, E. E., Waterloo (Scott Field, Ill.).....Major, A.U.S.
Smith. R. I., Waterloo (Reno, Nevada).....1st Lt., A.U.S.
Smith, R. G., Cedar Falls (APO 512, New York, N. Y.) .....Major, A.U.S.
Trunnell, T. L., Waterloo (care P.M., New York, N. Y.) .....Lt., U.S.N.R.

Boone County

Brewster, E. S., Boone (Camp Chaffee, Ark.)....Major, A.U.S.
Healy, M. D., Boone
Shane, R. S., Pilot Mound (Des Moines, Ia.) Lt. Col., A.U.S.

Bremer County

Amlie, P. J., Tripoli (Des Moines, Ia.)
Blum, O. S., Waverly (Bremerton, Wash.).....Lt., U.S.N.R.
Rathe, H. W., Waverly (Fort Jackson, S. C.).....Capt., A.U.S.
Shaw, R. E., Waverly (Carlisle Barracks, Pa.)....1st Lt., A.U.S.

Buchanan County

Barton, J. C., Independence (Camp McCain, Miss.).Lt. Col., A.U.S.
Hersey, N. L., Independence (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Leehey, P. J., Independence (APO 957, San Francisco, Cal.) .....Capt., A.U.S.
Loeck, J. F., Aurora (Camp Rucker, Ala.).....Capt., A.U.S.

Buena Vista County

Almquist, R. E., Albert City (Camp Shelby, Miss.).Capt., A.U.S.
Brecher, P. W., Storm Lake (Camp White, Ore.) Major, A.U.S.
Mailliard, R. E., Storm Lake (APO 254, Los Angeles, Cal.) .....Major, A.U.S.
Shope, C. D., Storm Lake (Fort Des Moines, Ia.) 1st Lt., A.U.S.
Witte, H. J., Storm Lake (Omaha, Neb.).....Major, A.U.S.

Butler County

Anderson, B. V., Greene (Fleet PO, Seattle, Wash.)....U.S.N.R.
James, R. O., Allison (Mare Island, Cal.)
Rolfs, F. O., Parkersburg (Springfield, Mo.)

Calhoun County

Grinley, A. V., Rockwell City (APO 507, New York, N. Y.) .....1st Lt., A.U.S.
Hobart, F. W., Lake City (Camp Grant, Ill.)....Capt., A.U.S.
Peek, L. H., Lake City (Jefferson Barracks, Mo.)..Capt., A.U.S.
Stevenson, W. W., Rockwell City (Port Hueneme Cal.) .....Lt. Comdr., U.S.N.R.
Weyer, J. J., Lohrville (Camp Carson, Colo.)....1st Lt., A.U.S.

Carroll County

Anneberg, A. R., Carroll (Camp Barkeley, Texas)
Anneberg, W. A., Carroll
Cochran, J. L., Carroll (Gulfport, Miss.)
Cross, D. L., Coon Rapids.....Lt., U.S.N.R.
Freedland, Maurice, Coon Rapids
Morrison, J. R., Carroll (Camp Maxey, Texas).....Capt., A.U.S.
Morrison, R. B., Carroll (Muroc, California)....1st. Lt., A.U.S.
Pascoe, P. L., Carroll (Bowman Field, Ky.)
Scannell, R. C., Carroll (APO, New York, N. Y.)
Tindall, R. N., Coon Rapids
Wyatt, M. R., Manning (Desert Center, Cal.)....1st Lt., A.U.S.

Cass County

Egbert, D. S., Atlantic (Fort Snelling, Minn.) Major, A.U.S.
Longstreth, C. M., Atlantic (Norman, Okla).Lt. Comdr., U.S.N.R.
Needles, R. M., Atlantic (Camp Polk, La.).....Capt., A.U.S.
Petersen, M. T., Atlantic (Topeka, Kan.).....Capt., A.U.S.

Cedar County

Laughlin, R. M., Tipton (San Diego, Cal.).....Lt., U.S.N.R.
Mosher. M. L., West Branch (Camp Gruber, Okla.) .....Capt., A.U.S.
O'Neal, H. E., Tipton (APO 254, Los Angeles, Cal.) .....Lt. Col., A.U.S.

Cerro Gordo County

Adams, C. O., Mason City (Brigham City, Utah)...Capt., A.U.S.
Egloff, W. C., Mason City (Mesa, Ariz.)
Flickinger, R. R., Mason City (Carlisle Barracks, Penn.) .....1st. Lt.. A.U.S.
Hale, A. E., Mason City (Camp Hale, Colo.)
Harris. R. H., Mason City (Columbus, Ohio)
Harrison, G. E., Mason City (Boston, Mass.).....Col., A.U.S.
Houlahan, J. E., Mason City (Sacramento, Cal.)
Lannon, J. W., Clear Lake (APO 668, New York, N. Y.) .....Capt., A.U.S.
Long, D. L., Mason City (Santa Ana, Cal.)
Marinos, H. G., Mason City (APO 25, San Francisco, Cal.) .....Capt., A.U.S.
Sternhill, Irving, Mason City (APO New York, N. Y.)

Cherokee County

Bullock, G. D., Washta (Camp Livingston, La.)....Capt., A.U.S.
Ihle, C. W., Jr., Cleghorn (Camp San Luis Obispo, Cal.) .....Major, A.U.S.
Noble, R. P., Cherokee (Rapid City, S. Dak.).....Capt., A.U.S.
Swift, C. H., Jr., Marcus (Fort Bliss, Texas)....Capt., A.U.S.

Chickasaw County

Caulfield, J. D., New Hampton (Denver, Colo.)....Capt., A.U.S.
Murphey, A. L., Fredericksburg (APO 827, New Orleans, La.) .....Capt., A.U.S.
O'Connor, E. C., New Hampton (Camp Crowder, Mo.) .....Capt., A.U.S.
Richmond, P. C., New Hampton (Camp Gruber, Okla.) .....Capt. A.U.S.

Clay County

Adams, G. W., Royal (Fort Clayton, Panama Canal Zone)
Edington, F. D., Spencer (Lowry Field, Colo.).....Col., A.U.S.
Jones, C. C., Spencer (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
King, D. H., Spencer (Spokane. Wash.).....Capt., A.U.S.

Clayton County

Anderson, H. M., Strawberry Point (Camp Crowder, Mo.) .....1st Lt., A.U.S.
Rhomberg, E. B., Guttenberg (Camp Wallace, Texas).Capt.,A.U.S.

Clinton County

Amesbury, H. A., Clinton (Vancouver, Wash.)
Burke, J. C., Clinton (Laredo, Tex.)
Ellison, G. M., Clinton (Washington, D. C.).....1st Lt., A.U.S.
Hill, D. E., Clinton
King, R. C., Clinton (Camp Chaffee, Ark.)
Lenaghan, R. T., Clinton (Farragut, Idaho)
Meyer, A. K., Clinton (Denver, Colo.)
Norment, J. E., Clinton (Mare Island, Cal.)
Riedesel, E. V., Wheatland (Fort Douglas, Utah)
Snyder, D. C., De Witt
Van Epps, E. F., Clinton (Palm Springs, Cal.).....Capt., A.U.S.
Waggoner, C. V., Clinton (Seattle, Wash.)..Lt. Cmdr., U.S.N.R.

Crawford County

Fee, C. H., Denison (Bowman Field, Ky.).....Capt., A.U.S.
Grau, A. H., Denison.....Lt. Comdr., U.S.N.R.
Maire, E. J., Vail (San Francisco, Cal.)
Wetrich, M. F., Manilla (San Antonio, Tex.)

Dallas-Guthrie Counties

Fail, C. S., Adel (Hayden Lake, Idaho).....Lt., U.S.N.R.
Margolin, J. M., Perry (Camp Cooke, Cal.).....Capt., A.U.S.
McGilvra. R. I., Guthrie Center (San Diego, Cal.)..Lt., U.S.N.R.
Mullmann, A. J., Adel (Washington, D. C.).....Capt., A.U.S.
Nicoll, C. A., Panora (Camp Chaffee, Ark.).....Capt., A.U.S.
Osborn, C. R., Dexter (San Francisco, Cal.)....Lt. (jg), U.S.N.R.
Todd, D. W., Guthrie Center (Camp McCoy, Wis.) .....1st Lt., A.U.S.
Wilke, F. A., Woodward (APO 628, New York, N. Y.) .....1st Lt., A.U.S.

Decatur County

Doss, W. N., Leon (APO 924, San Francisco, Cal.)
Gamet, E. E., Lamoni (Tacoma, Wash.)

Delaware County

Baumgarten, Oscar, Earlville (APO 307, Los Angeles, Cal.).A.U.S.
Clark, R. E., Manchester (Fort Riley, Kan.)....1st Lt., A.U.S.

Des Moines County

Eigenfeld, M. L., Burlington (Camp Robinson, Ark.) .....1st. Lt., A.U.S.
Heitzman, P. O., Burlington (Fort Leonard Wood, Mo.)
Jenkins. G. D., Burlington (West Point, N. Y.)....Lt. Col. A.U.S.
Lohmann, C. J., Burlington (Fort Lewis, Wash.)..Major, A.U.S.
McKitterick, J. C., Burlington (Davisville, R. I.) .....Lt. Comdr., U.S.N.R.
Moerke, R. F., Burlington (Abilene, Texas).....1st Lt., A.U.S.
Sage, E. C., Burlington.....Lt. Comdr., U.S.N.R.

Dickinson County

Buchanan, J. J., Milford (Fleet PO, New York, N. Y.) .....Lt. Comdr., U.S.N.R.
Henning, G. G., Milford (Camp Adair, Ore.).....Major, A.U.S.
Nicholson, C. G., Spirit Lake (Sawtelle, Cal.).....Capt., A.U.S.
Rodawig, D. F., Spirit Lake (Fort Hancock, N. J.) .. ..Capt., A.U.S.

Dubuque County

Beddoes, M. G., Cascade (Kansas City, Mo.)....Capt., A.U.S.
Conzett, D. C., Dubuque (Fort Riley, Kan.).....Lt. Col., A.U.S.
Cunningham, J. C., Dubuque (Meridian, Miss.) Capt., A.U.S.
Edstrom, Henry, Dubuque (Clinton, Iowa).....Major, A.U.S.
Entringer, A. J., Dubuque (APO San Francisco, Cal.) .....Capt., A.U.S.
Hall, C. B., Dubuque (San Antonio, Texas).....1st Lt., A.U.S.
Knoll, A. H., Dubuque (San Francisco, Cal.)....Major, A.U.S.
Langford, W. R., Epworth (APO 948, Seattle, Wash.) .....Capt., A.U.S.
Lavery, H. B., Dubuque (Washington, D. C.)....Lt. Col., A.U.S.
Leik, D. W., Dubuque (Douglas, Ariz.).....1st Lt., A.U.S.
Mueller, J. J., Dubuque (Hattiesburg, Miss.)....1st Lt., A.U.S.
Olson, P. F., Dubuque (Fleet PO, Seattle, Wash.)....Lt., U.S.N.R.
Painter, R. C., Dubuque (care PM, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Paulus, J. W., Dubuque (Camp Merced, Cal.)....1st Lt., A.U.S.
Plankers, A. G., Dubuque (APO New York, N. Y.) Major, A.U.S.
Quinn, F. P., Dubuque (Carlisle Barracks, Penn.).Major, A.U.S.
Scharle, Theodore, Dubuque (Fort Lawton, Wash.) Capt., A.U.S.
Schueller, C. J., Dubuque (APO 3922, New York, N. Y.) .....1st Lt., A.U.S.
Sharpe, D. C., Dubuque (Fort Leonard Wood, Mo.)..Capt., A.U.S.
Smith, C. W., Dubuque (Fleet PO, San Francisco, Cal. .....Lt., U.S.N.R.
Steffens, L. F., Dubuque (Camp Chaffee, Ark.)..Lt. Col., A.U.S.
Straub, J. J., Dubuque (care PM, San Francisco, Cal.) .....Lt., U.S.N.R.
Ward, D. F., Dubuque (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.

Emmet County

Clark, J. P., Estherville (Fort Sam Houston, Texas) .....Capt., A.U.S.
Miller, O. H., Estherville (Gowen Field, Idaho) .....Lt. Comdr., U.S.N.R.

Fayette County

Camp, D. E., West Union (Camp Blanding, Fla.)...Capt.. A.U.S.
Gallagher, J. P., Oelwein (Camp Elliott, Cal.)....Lt., U.S.N.R.
Henderson, W. B., Oelwein (St. Louis, Mo.).....Major, A.U.S.
Hess, A. M., West Union (Randolph Field, Texas) .....1st Lt., A.U.S.
Moen, H. P., West Union (Camp Barkeley, Texas)..Capt., A.U.S
Sulzbach, John, Oelwein

Floyd County

Baltzell, W. C., Charles City (Camp McCoy, Wis.)..Capt., A.U.S.
Flater, N. C., Floyd (Rockford, Ill.).....Capt., A.U.S.
Knight, R. A., Rockford (San Diego, Cal.).....Lt., U.S.N.R.
Mackie, D. G., Charles City (Topeka, Kan.)....1st Lt., A.U.S.
Miner, J. B., Jr., Charles City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Tolliver, H. A., Charles City (San Pedro, Cal.)....Capt., A.U.S.

Franklin County

Byers, W. L., Sheffield (Jefferson Barracks, Mo.).1st Lt., A.U.S.
Hedgecock, L. E., Hampton (care PM, San Francisco, Cal.) .....Lt., U.S.N.R.
Randall, W. L., Hampton (San Diego, Cal.).....Lt., U.S.N.R.
Walton, S. G., Hampton (Camp Robinson, Ark.) 1st Lt., A.U.S.

Fremont County

Kerr, W. H., Hamburg (Camp Phillips, Kan.)....Capt., A.U.S.
Marrs, W. D., Tabor (APO 846, New York, N. Y.) .....1st Lt., A U.S.
Wanamaker, A. R., Hamburg (Los Angeles, Cal.)..Capt., A.U.S.

Greene County

Cartwright, F. P., Grand Junction (Casper, Wyo.) Capt., A.U.S.
Castles, W. A., Jr., Rippey (APO San Francisco, Cal.) .....Capt. A.U.S.
Hanson, L. C., Jefferson (Camp Rucker, Ala.)...1st Lt., A.U.S.
Jongewaard, A. J., Jefferson (St. Louis, Mo.).....U.S.N.R.
Limberg, J. I., Jr., Jefferson (APO San Francisco, Cal., ...Capt., A.U.S.
Lohr, P. E., Churdan (San Diego, Cal.).....A.U.S.

Grundy County

Rose, J. E., Grundy Center (Norman, Okla.) Lt. Comdr., U.S.N.R.

Hamilton County

Buxton, O. C., Webster City (March Field, Cal.)..1st Lt., A.U.S.
Howar, B. F., Jewell (APO 514, New York, N. Y.) .Capt., A.U.S.
James, D. W., Kamrar (APO 3792, New York, N. Y.) .....Capt., A.U.S.
Lewis, W. B., Webster City (APO 4500, New York, N. Y.) .....Capt., A.U.S.
Mooney, F. P. Jewell (APO New York, N. Y.)
Paschal, G. A., Williams (Camp Barkeley, Texas)..Capt., A.U.S.
Patterson, R. A., Webster City (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Ptacek, J. L., Webster City (Sheppard Field, Texas)
Thompson, E. D., Webster City (Biloxi, Miss.)..Capt., A.U.S.

Hancock-Winnebago Counties

Dolmage, G. H., Buffalo Center (Camp Robinson, Ark.)...A.U.S.
Dulmes, A. H., Klemme (Camp Lewis, Wash.).....Capt., A.U.S.
Eller, L. W., Kanawha (APO 302, New York, N. Y.) .....1st. Lt., A.U.S
Shaw, D. F., Britt (Long Beach, Cal.)
Thomas, C. W., Forest City (Camp Crowder, Mo.)..Capt., A.U.S.

Hardin County

Houlihan, F. W., Ackley (APO 860, New York, N. Y.) .....1st. Lt., A.U.S.
Jansonius, J. W., Eldora (Fort Rosecrans, Cal.)....Capt., A.U.S.
Johnson, R. J., Iowa Falls (Fort Bliss, Texas)..Capt., A.U.S.
Johnson, W. A., Alden (Pendleton, Ore.)
Shurts, J. J., Eldora (Camp Roberts, Cal.).....1st Lt., A.U.S.
Todd, V. S., Eldora (Camp Barkeley, Texas).....1st Lt., A.U.S.

Harrison County

Bergstrom, A. C., Missouri Valley (Camp Robinson, Ark.)
Burbridge, G. E., Logan (Ft. Benning, Ga.).....Major, A.U.S.
Byrnes, C. W., Dunlap (Jefferson Barracks, Mo.)
Heise, C. A., Jr., Missouri Valley
Tamisiea, F. X., Missouri Valley (Jefferson Barracks, Mo.) .....1st Lt., A.U.S.

Henry County

Brown, W. B., Mount Pleasant (Ft. Devens, Mass.)..Major, A.U.S.
Cogan, Samuel, Mt. Pleasant.....A.U.S.
Dwankowski, Carl, Mt. Pleasant.....A.U.S.
Gloeckler, B. B., Mount Pleasant (Laurel, Md.).....Capt., A.U.S.
Hartley, B. D., Mount Pleasant (Yuma, Ariz.)....Capt., A.U.S.
Megorden, W. H., Mount Pleasant (Ogden, Utah) 1st Lt., A.U.S.
Ristine, L. P., Mount Pleasant (Sioux Falls, S. Dak.) .....Major, A.U.S.

Howard County

Buresh, Abner, Lime Springs (San Diego, Cal.)
Nierling, P. A., Cresco (Camp Polk, La.).....1st Lt., A.U.S.

Humboldt County

Arent, A. S., Humboldt (Stockton, Cal.).....1st Lt., A.U.S.
Coddington, J. H., Humboldt (Fresno, Cal.).....1st Lt., A.U.S.

Ida County

Dressler, J. B., Ida Grove (Texarkana, Tex.)....1st Lt., A.U.S.
Harris, H. H., Battle Creek (Omaha, Neb.)....1st Lt., A.U.S.
Martin, J. W., Holstein (Montgomery, Ala.).....Capt., A.U.S.

Iowa County

McDaniel, J. D., Marengo (Fort Clark, Texas).....A.U.S.
Miller, D. F., Williamsburg (Farragut, Idaho).....Lt., U.S.N.R.

Jackson County

Swift, F. J., Jr., Maquoketa (Fort Bragg, N. C.)..Major, A.U.S

Jasper County

Doake, Clarke, Newton.....1st Lt., A.U.S.
Minkel, R. M., Newton (APO New York, N. Y.) 1st Lt., A.U.S.
Ritchey, S. J., Newton.....Major, A.U.S.

Jefferson County

Castell, J. W., Fairfield (APO 1001, New York, N. Y.) .....Capt., A.U.S.
Gittler, Ludwig, Fairfield (APO 1001, New York, N. Y.) .....Major, A.U.S.
Graber H. E., Fairfield (Carlisle Barracks, Penn.) Major, A.U.S.
James, L. D., Fairfield (Camp Dodge, Iowa)....Lt. Col., A.U.S.
Taylor, I. C., Fairfield (Washington, D. C.)....1st Lt., A.U.S.

Johnson County

Agnew, J. W., Iowa City (Camp Phillips, Kan.)..1st Lt., A.U.S.
Allen, J. H., Iowa City (Scott Field, Ill.).....Capt., A.U.S.
Boiler, W. F., Iowa City (Fort Leonard Wood, Mo.) .....Major, A.U.S.
Boyd, E. J., Iowa City (Colorado Springs, Colo.).1st Lt., A.U.S.
Brinkhous, K. M., Iowa City (Fort Houston, Texas) Lt. Col., A.U.S.
Callahan, G. D., Iowa City (El Toro, Cal.).....Lt., U.S.N.R.
Cooper, W. K., Iowa City (Jefferson Barracks, Mo.) Capt., A.U.S.
Crowell, E. A., Iowa City (Spokane, Wash.)..1st Lt., A.U.S.
Diddle, A. W., Iowa City (Key West, Fla.)..Lt. (jg), U.S.N.R.
Dorner, R. A., Iowa City (APO New York, N. Y.).1st Lt., A.U.S.
Elmquist, H. S., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Emmons, M. B., Iowa City (Fort Sam Houston, Texas) .....1st Lt., A.U.S.
Flynn, J. E., Iowa City (Hot Springs, Ark.).....A.U.S.
Fourt, A. S., Iowa City (APO 1001, New York, N. Y.) .....Col., A.U.S.
Francis, N. L., Iowa City (Annapolis, Md.) Lt. (jg), U.S.N.R.
Galinsky, L. J., Oakdale (Camp Crowder, Mo.).....Capt., A.U S.
Garlinghouse, R. O., Iowa City (Fort Snelling, Minn.)..A.U.S.
Hardin, R. C., Iowa City (APO 1001, New York, N. Y.)....A.U.S.
Hartung, Walter, Iowa City (Fort Des Moines, Iowa)..A.U.S.
Irwin, R. L., Iowa City (Iowa City, Iowa)..Lt. Comdr., U.S.N.R.
January, L. E., Iowa City (Davis-Monthan Field, Ariz.) .....1st Lt., A.U.S.
Keisler, H. D., Iowa City (Camp Barkeley, Tex.)..1st Lt., A.U.S.
Lage, R. H., Iowa City (Santa Barbara, Cal.).....Lt., U.S.N.R.
Longwell, F. H., Iowa City (APO 505, New York, N. Y.) .....Capt., A.U.S.
Nagyfy, S. F., Iowa City (Memphis, Tenn.)...Lt. (jg), U.S.N.R.
Newman, R. W., Iowa City (Fleet PO, New York, N. Y.) .....Lt., U.S.N.R.
Parkin, G. L., Iowa City (Carlisle Barracks, Pa.)..1st Lt., A.U.S.
Paulus, E. W., Iowa City (APO 1001, New York, N. Y.) .....Lt. Col., A.U.S.
Petersen, V. W., Iowa City (APO 1001, New York, N. Y.) .....Col., A.U.S.
Sells, R. L., Jr., Iowa City (Hamilton Field, Cal.).1st Lt., A.U.S.
Smith, H. F., Iowa City (Great Lakes, Ill.).Lt. Comdr., U.S.N.R.
Springer, E. W., Iowa City (APO 622, Miami, Fla.).1st Lt., A.U.S.
Stadler, H. E., Iowa City (Washington, D. C.)....1st Lt., A.U.S.
Staggs, W. A., Iowa City (Camp Robinson, Ark.)..1st Lt., A.U.S.
Stephens, R. L., Iowa City (Orlando, Fla.).....Capt., A.U.S.
Stump, R. B., Iowa City (Fort Leonard Wood, Mo.)..A.U.S.
Titus, E. L., Iowa City (Fort Wright, N. Y.)....Col., A.U.S.
Vest, W. M., Iowa City (Fort Ord, Cal.).....Capt., A.U.S.
Ziffren, S. E., Iowa City (Springfield, Mo.)....1st. Lt., A.U.S.

Junior Members

Adams, M. P., Iowa City
Ahrens, J. H., Iowa City (APO San Francisco, Cal.).....A.U.S.
Ball, A. L., Iowa City (Camp Polk, La.).....Major, A.U.S.
Barrent, M. E., Iowa City (Camp Tyson, Tenn.)..Capt., A.U.S.
Black, N. M., Iowa City (McChord Field, Wash.) 1st Lt., A.U.S.
Blair, J. D., Iowa City (APO San Francisco, Cal.).Major, A.U.S.
Boyd, R. J., Iowa City (Spokane, Wash.).....Capt., A.U.S.
Brintnall, E. S., Iowa City (Colorado Springs, Colo.) .....1st Lt., A.U.S.
Burr, S. P., Iowa City (APO San Francisco, Cal.).1st Lt., A.U.S
Connole J. F., Iowa City (Camp Bowie, Texas)..1st Lt., A.U.S.
Couch, O. A., Iowa City (Camp Van Dorn, Miss.)..1st Lt., A.U.S.

Decker, C. E., Iowa City (Oklahoma City, Okla.)..1st Lt., A.U.S.
Donnelly B. A., Iowa City (APO San Francisco, Cal.) .....1st Lt., A.U.S.
Ehrenhaft, J. L., Iowa City (March Field, Cal.)..1st Lt., A.U.S.
Englerth, F. L., Iowa City (APO San Francisco, Cal.) .....Capt., A.U.S.
Freiberg, M., Iowa City (Jefferson Barracks, Mo.).....A.U.S.
Glassman A. L., Iowa City (Palm Springs, Cal.) 1st Lt., A.U.S
Gilliland, C. H., Iowa City (Great Lakes, Ill.) Lt. (jg), U.S.N.R.
Hamilton, H. E., Iowa City (Chicago, Ill.).....1st Lt., A.U.S.
Harms, G. E., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Ide, L. W., Iowa City (Fort Warren, Wyo.).....1st Lt., A.U.S.
Jacobs, C. A., Iowa City (APO New York, N. Y.).Major, A.U.S.
Keil, P. G., Iowa City (Sioux City, Iowa).....1st Lt., A.U.S.
Kelberg, M. R., Iowa City (Treasure Island, Cal.) .....Lt. (jg), U.S.N.R
Keleher, M. F., Iowa City (Great Lakes, Ill.)..Lt. (jg), U.S.N.R.
Keohen, G. F., Iowa City (Camp Grant, Ill.)....Capt., A.U.S.
Kugler, F. E., Iowa City (Fort Warren, Wyo.)....Capt., A.U.S.
Lowry, F. C., Iowa City (Sioux Falls, S. D.)....1st Lt., A.U.S.
McCann, J. P., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
McQuiston, W. O., Iowa City (Chicago, Ill.)....1st Lt., A.U.S.
Moen, B. H., Iowa City
Moon, R. E., Iowa City (Camp Bowie, Texas)....1st Lt., A.U.S.
Noble, W. C., Iowa City (Camp San Luis Obispo, Cal.) .....1st Lt., A.U.S.
Phillips, R. M., Iowa City (San Francisco, Cal.) 1st Lt., A.U.S.
Pulliam, R. L., Iowa City (Portland, Ore.).....Major, A.U.S.
Randall, C. G., Iowa City
Randall, R. G., Iowa City (Waterloo, Iowa).....Capt. A.U.S.
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.) .....1st Lt., A.U.S.
Russin, L. A., Iowa City (Fort Blanding, Fla.)....Capt., A.U.S.
Saar, J. L., Iowa City (APO New York, N. Y.)..Capt., A.U.S.
Sawtelle, W. W., Iowa City
Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Shand, J. A., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Shapiro, S. I., Iowa City
Simpson, F. E., Iowa City (Camp Grant, Ill.).....A.U.S
Skewis, J. E., Iowa City (Rochester, N. Y.)..Lt. (jg), U.S.N.R.
Skouge, O. T., Iowa City
Towle, R. A., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Warren, R. F., Iowa City (Santa Barbara, Cal.).....A.U.S.
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.) .....1st. Lt., A.U.S.
Wicks, W. J., Iowa City (Camp Crowder, Mo.)....Capt., A.U.S.
Williams, L. A., Iowa City (Treasure Island, Cal.).1st Lt., A.U.S.
Willumsen, H. C., Iowa City (Chico, Cal.).....Capt., A.U.S.
Wolkin, J., Iowa City (San Antonio, Texas)....Capt., A.U.S.
Yetter, W. L., Iowa City (APO New York, N. Y.) Capt., A.U.S.
Zahrt, N. E., Iowa City (Miami Beach, Fla.)....1st Lt., A.U.S.
Zimmerman, H. A., Iowa City (Santa Ana, Cal.)..1st Lt., A.U.S.

Keokuk County

Bjork, Floyd, Keota (Camp Barkeley, Texas).....A.U.S.
Doyle, J. L., Sigourney (Camp Barkeley, Texas).....A.U.S.
Engelmann, A. T., What Cheer (Camp Polk, La.) Capt., A.U.S.
Graham, J. A., Gibson (Needles, Cal.).....1st. Lt., A.U.S.
Montgomery, G. E., Keota (Fort Sam Houston, Texas)....A.U.S.
Wiley, Dudley, Hedrick (Mason City, Wash.)

Kossuth County

Clapsaddle, D. W., Burt (Durham, N. C.).....1st Lt., A.U.S.
Williams, R. L., Lakota (San Diego, Cal.)..Lt. Comdr., U.S.N.R.

Lee County

Ashline, G. H., Keokuk (Indiantown Gap, Pa.)....Capt., A.U.S.
Cleary, H. G., Fort Madison (APO 980, Seattle, Wash.)
Cooper, R. E., Keokuk (Fort Leonard Wood, Mo.)
Johnstone, A. A., Keokuk (Camp Robinson, Ark.)....Col., A.U.S.
McKee, T. L., Keokuk (APO 922, San Francisco, Cal.) .....Major, A.U.S.
Pumphrey, L. C., Keokuk (Memphis, Tenn.).....Major, A.U.S.
Rankin, J. R., Keokuk (Chicago, Ill.).....Lt., U.S.N.R.
Steffey, F. L., Keokuk (Fort Snelling, Minn.)
Van Werden, B. D., Keokuk (Fort Jackson, S. C.)..Capt., A.U.S.

Linn County

Andre, G. R., Lisbon (Camp Barkeley, Texas)....Major, A.U.S.
Berney, P. W., Cedar Rapids (San Francisco, Cal.) Capt., A.U.S.
Block, W. M., Cedar Rapids (Vancouver, Wash.)...1st Lt., A.U.S.
Chapman, R. M., Cedar Rapids (Chicago, Ill.)..1st Lt., A.U.S.
Coughlan, V. H., Cedar Rapids (Fort Snelling, Minn.)
Courter, W. O., Springville (Fort Warren, Wyo.)....Capt., A.U.S.
Crew, P. I., Marion (Northfield, Vt.).....Capt., A.U.S.
Dunn, F. C., Cedar Rapids (Chicago, Ill.).....Capt., A.U.S.
Halpin, L. J., Cedar Rapids (Atlanta, Ga.)....Major, A.U.S.
Hecker J. T., Cedar Rapids (Pecos, Texas).....1st Lt., A.U.S.
Jirsa, H. O., Cedar Rapids (APO 871, New York. N. Y.) .....Major, A.U.S.
Keith, J. J., Marion (APO 502, San Francisco, Cal.) .....Capt., A.U.S.
Kieck, E. G., Cedar Rapids (San Diego, Cal.) Lt. Comdr., U.S.N.R.
Kruckenberg, W. G., Mount Vernon (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Locher, R. C., Cedar Rapids (Merced, Cal.).....Major, A.U.S.
MacDougal, R. F., Cedar Rapids (Carlisle Barracks, Pa.) .....Capt., A.U.S.
McConkie, E. B., Cedar Rapids (Sioux Falls, S. Dak.).....Major, A.U.S.
McQuiston, J. S., Cedar Rapids (Salina, Kan.)..Major, A.U.S.
Netolicky, R. Y., Cedar Rapids (San Francisco, Cal.).Lt., U.S.N.R.
Noe, C. A., Cedar Rapids (Hot Springs, Ark.)..Major, A.U.S.
Parke, John, Cedar Rapids (APO 34, New York, N. Y.) .....Capt., A.U.S.
Proctor, R. D., Cedar Rapids (Corpus Christi, Texas) .....Lt. Comdr., U.S.N.R.
Redmond, J. J., Cedar Rapids (APO 813, New York, N. Y.) .....Major, A.U.S.
Rieniets, J. H., Cedar Rapids (Fleet PO, San Francisco, Cal.) .....Lt. Comdr, U.S.N.R.
Sedlacek, L. B., Cedar Rapids (Camp Shelby, Miss.) .....Lt. Col., A.U.S.
Smrha, J. A., Cedar Rapids (Camp Davis, N. C.)..1st Lt., A.U.S.
Stark, C. H., Cedar Rapids (Denver, Colo.).....Capt., A.U.S.
Sulek, A. E., Cedar Rapids (APO 960, San Francisco, Cal.) .....Major, A.U.S.
Woodhouse, K. W., Cedar Rapids (APO 34, New York, N. Y.) .....Lt. Col., A.U.S.
Wray, R. M., Cedar Rapids (APO 958, San Francisco, Cal.) .....Major, A.U.S.
Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R

Louisa County

DeYarman, K. T., Morning Sun (San Antonio, Texas) .....1st Lt., A.U.S.
Tandy, R. W., Morning Sun (Norfolk, Va.)..Lt. Comdr., U.S.N.R.

Lucas County

Lister, K. E., Chariton (Fort Snelling, Minn.)

Lyon County

Cook, S. H., Rock Rapids (Memphis, Tenn.).....Capt., A.U.S.
‡Corcoran, T. E., Rock Rapids (APO New York) N. Y.) .....Capt. A.U.S.
Moriarty, J. F., Rock Rapids (APO 700, New York, N. Y.) .....Capt. A.U.S.

Madison County

Boden, H. N., Truro (Fresno, Cal.)
Chesnut, P. F., Winterset (Portland, Ore.).....1st Lt., A.U.S.
Wicks, R. F., Winterset (Portland, Ore.)
Veltman, J. F., Winterset (Ft. Leonard Wood, Mo.).Capt., A.U.S.

Mahaska County

Bennett, G. W., Oskaloosa (Fort Riley, Kan.)..Major, A.U.S.
Clark, G. H., Oskaloosa.....Lt. Comdr., U.S.N.R.
Greenlee, M. R., Oskaloosa (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Lemon, K.M., Oskaloosa.....1st Lt., A.U.S.
Zager, L. L., Oskaloosa (Camp Rucker, Ala.)....1st. Lt., A.U.S.

Marion County

Elliott, V. J., Knoxville (Portland, Ore.).....Capt., A.U.S.
Mater, D. W., Knoxville (Lincoln, Neb.).....Capt., A.U.S.
Ralston, F. P., Knoxville (Indio, Cal.).....Capt., A.U.S.
Schiek, C. M., Knoxville.....Lt. Comdr., U.S.N.R.
Schroeder, M. C., Pella (Camp Uhlan, Texas)....1st Lt., A.U.S.
Williams, D. B., Knoxville.....Capt. A.U.S.

Marshall County

Carpenter, R. C., Marshalltown (APO New York, N. Y.) .....Capt., A.U.S.
Marble, E. J., Marshalltown (San Diego, Cal.)....Lt., U.S.N.R.
Marble, W. P., Marshalltown (Walla Walla, Wash.) Capt., A.U.S.
Meyer, M. G., Marshalltown (Camp Polk, La.)....Capt., A.U.S.
Noonan, J. J., Marshalltown (San Diego, Cal.)..Major, A.U.S.
Phelps, R. E., State Center (Fort Cronkhite, Cal.) .....1st Lt., A.U.S.
Sinning, J. J., Melbourne (Camp Robinson, Ark.)..Capt., A.U.S.
Smith, E. M., State Center (Sioux City, Ia.).....Lt. Col., A.U.S.
Stegman, J. J., Marshalltown (Portland, Ore.)..Capt., A.U.S.
Wells, R. C., Marshalltown (Gowen Field, Idaho) 1st Lt., A.U.S.
Wolfe, O. D., Marshalltown (Fort Riley, Kan.)..Capt., A.U.S.
Wolfe, R. M., Marshalltown (Cherry Point, N. C.) .....Lt. (jg), U.S.N.R.

Mills County

DeYoung, W. A., Glenwood (APO 8857, New York. N. Y.) .....Capt., A.U.S.
Magaret, E. C., Glenwood (Lubbock, Texas)....1st Lt., A.U.S.
Shonka, T. E., Malvern (Baltimore, Md.).....1st Lt., A.U.S.

Mitchell County

Culbertson, R. A., St. Ansgar (Modesto, Cal.).....Major, A.U.S.
Moore, E. E. (Camp Pickett, Virginia).....Major, A.U.S.
Owen, William (San Diego, Cal.).....Lt. (jg), U.S.N.R.
Walker, T. G., Riceville (Minneapolis, Minn.).....Lt., U.S.N.R.

Monona County

Almer, L. E., Moorehead (Fort Knox, Ky.)
Ganzhorn, H. L., Mapleton (Carlisle Barracks, Pa.) .....1st. Lt., A.U.S.
Gaukel, L. A., Onawa (APO 937, Seattle, Wash.)..1st Lt., A.U.S.
†Harlan, M. E., Onawa (care PM, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Stauch, M. O., Whiting (Fort Rosecrans, Cal.).....A.U.S.
Wainwright, M. T., Mapleton (APO 939, Seattle, Wash.)..A.U.S.
Wolpert, P. L., Onawa (Rochester, Minn.).....1st Lt., A.U.S.

Monroe County

Heimann, V. R., Albia (Camp Maxey, Texas).....Capt., A.U.S.
Richter, H. A., Albia (Waco, Texas).....Capt., A.U.S.
Smith, R. A., Albia (San Antonio, Texas).....1st Lt., A.U.S.

Montgomery County

Bastron, H. C., Red Oak (APO 525, New York, N. Y.) .....Major, A.U.S.
Hansen, F. A., Red Oak (San Diego, Cal.).....Lt., U.S.N.R.
Moriarty, L. R., Villisca (APO 944, Seattle, Wash.).Capt., A.U.S.
Sorensen, E. M., Red Oak (Jefferson Barracks, Mo.) .....1st. Lt., A.U.S.

Muscatine County

Ady, A. E., West Liberty (care PM, San Francisco, Cal.)U.S.N.R.
Asthalter, R. W., Muscatine (Fort Meade, Md.)..1st Lt., A.U.S.
Carlson, E. H., Muscatine (Kalamazoo, Mich.)....Capt., A.U.S.
Goad, R. R., Muscatine (Washington, D. C.) Lt. Comdr., U.S.N.R.
Kimball, J. E., Jr., West Liberty (APO Miami, Fla.)
Lindley, E. L., Muscatine (APO Los Angeles, Cal.).Capt., A.U.S.
Muhs, E. O., Muscatine (Camp Claiborne, La.).....Capt., A.U.S.
Norem, Walter, Muscatine (APO Miami, Fla.)....Capt., A.U.S.

Robertson, T. A., West Liberty (Carlisle Barracks, Penn.) ....1st Lt., A.U.S.
Sywassink, G. A., Muscatine (Camp Campbell, Ky.) Major, A.U.S.
Whitmer, L. H., Wilton Junction (Fort Sill, Okla.) .Major, A.U.S.

O'Brien County

Getty, E. B., Primghar (Camp Robinson, Ark.)..1st Lt., A.U.S.
Hayne, W. W., Paullina (APO New York, N. Y.)..1st Lt., A.U.S.
Moen, S. T., Hartley (APO 3492, New York, N. Y.) .Major, A.U.S.
Myers, K. W., Sheldon (Watertown, S. Dak.)..1st Lt., A.U.S.

Osceola County

Kuntz, G. S., Sibley (APO 34, New York, N. Y.)

Page County

Barnes, C. A., Shenandoah (Fort Bragg, N. C.)....Capt., A.U.S.
Blackman, Nathan, Shenandoah.....Capt., A.U.S.
Bossingham, E. N., Clarinda (APO 923, San Francisco, Cal.) .....Capt., A.U.S.
Bunch, H. Mck., Shenandoah (Farragut, Idaho) .....Lt. Comdr., U.S.N.R.
‡Burdick, F. D., Shenandoah (APO, New York, N. Y.) .....Capt., A.U.S.
Burnett, F. K., Clarinda (Camp Carson, Colo.)....Major, A.U.S.
Little, E. B., Shenandoah.....1st Lt., A.U.S.
Rausch, G. R., Clarinda (Wendover Field, Utah) 1st Lt., A.U.S.
Savage, L. W., Shenandoah (Fort Meade, Md.)..1st Lt., A.U.S.

Palo Alto County

Davey, W. P., Emmetsburg (San Diego, Cal.) Lt. (jg), U.S.N.R.

Plymouth County

Bowers, C. V., LeMars (Carlisle Barrack, Pa.)...1st Lt., A.U.S.
Foss, R. H., Remsen (Salt Lake City, Utah)..1st Lt., A.U.S.
Wolfson, Harold (Fort Lewis, Wash.).....Capt., A.U.S.

Pocahontas County

Blair, F. L., Jr., Fonda.....1st Lt., A.U.S.
Herrick, T. G., Gilmore City (Camp Hale, Colo.)..Capt., A.U.S.
Larson, J. B., Laurens (Camp Chaffee, Ark.).....1st Lt., A.U.S.
Leserman, L. K., Rolfe (Camp Polk, La.).....1st Lt., A.U.S.

Polk County

Abbott, W. D., Des Moines (Oakland, Cal.)..Lt. Comdr., U.S.N.R.
Anderson, N. B., Des Moines (APO 668, New York, N. Y.) .....Lt. Col., A.U.S.
Angell, C. A., Des Moines (Camp Maxey, Texas)....Capt., A.U.S.
Anspach, R. S., Mitchellville (APO 762, New York, N. Y.) .....Lt. Col., A.U.S.
Barner, J. L., Des Moines (Atlanta, Ga.)....Major, A.U.S.
Barnes, B. C., Des Moines (Ogden, Utah).....Capt., A.U.S.
Bates, M. T., Des Moines (Fleet PO, New York, N. Y.) .....Lt. Comdr., U.S.N.R.
Bender, H. R., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Bond, T. A., Des Moines (Rochester, Minn.)....Lt. (jg), U.S.N.R.
Bone, H. C., Des Moines (Arlington, Cal.).....Capt., A.U.S.
Brown, A. W., Des Moines (Fort Leavenworth, Kan.) .....Capt., A.U.S.
Bruner, J. M., Des Moines (Fort Bliss, Texas)....Major, A.U.S.
Bruns, P. D., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
‡Burgeson, F. M., Des Moines (Am. P.O.W. 4372, Oflag, 9 A/Z, Germany.....Capt., A.U.S.
Caldwell, J. W., Des Moines (Vulcan, Alberta, Canada) .....Flight Lt., R.C.A.F.
Chambers, J. W., Des Moines (Fort Riley, Kan.)..1st Lt., A.U.S.
Chase, W. B., Jr., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Clark, G. E., Jr., Des Moines (Randolph Field, Texas) .....1st Lt., A.U.S.
Connell, J. R., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Corn, H. H., Des Moines (St. Louis, Mo.).....1st Lt., A.U.S.
Coughlan, D. W., Des Moines (Camp Gruber, Okla.) Capt., A.U.S.
Crowley, D. F., Jr., Des Moines (APO New York, N. Y.) .....Capt., A.U.S.
Crowley, F. A., Des Moines (APO New York, N. Y.) .....1st Lt., A.U.S.
DeCicco, Ralph, Des Moines (APO Los Angeles, Cal.) .....Capt., A.U.S.
Decker, H. G., Des Moines (Long Beach, Cal.)....Lt., U.S.N.R.
Downing, A. H., Des Moines (Fort Snelling, Minn.) .....1st Lt., A.U.S.
Dushkin, M. A., Des Moines (Fort Huachuca, Ariz.) .....Capt., A.U.S.
Elliott, O. A., Des Moines (Pecos, Texas).....1st Lt., A.U.S.
Ellis, H. G., Des Moines (Kearney, Nebr.).....Capt., A.U.S.
Ervin, L. J., Des Moines (Fort Clark, Texas)....Major, A.U.S.
Fried, David, Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Fracasse, John, Des Moines.....1st Lt., A.U.S.
George, E. M., Des Moines (Camp Dodge, Iowa) .....Lt. Comdr., U.S.N.R.
Gerchek, E. W., Des Moines
Goldberg, Louie, Des Moines (Randolph Field, Texas) .....1st Lt., A.U.S.
Gordon, A. M., Des Moines (Fort Ord, Cal.)....Capt., A.U.S.
Graeber, F. O., Des Moines (Aberdeen, S. Dak.)..1st Lt., A.U.S.
Greek, L. M., Des Moines (Camp Crowder, Mo.)..1st Lt., A.U.S.
Gurau, H. H., Des Moines (Portland, Ore.)....1st Lt., A.U.S.
Haines, D. J., Des Moines (Denver, Colo.)....1st Lt., A.U.S.
Harris, D. D., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Harris, H. L., Des Moines.....1st Lt., A.U.S.
Hess, John, Jr., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
James, A. D., Des Moines (Fleet PO, San Francisco, Cal.) .....Comdr., U.S.N.R.
Johnston, C. H., Des Moines (APO 639, New York, N. Y.) .....Lt. Col., A.U.S.
Kast, D. H., Des Moines (Fort Stevens, Ore.).....Capt., A.U.S.
Kelley, E. J., Des Moines (Piedmont, Cal.).Lt. Comdr., U.S.N.R.
Kelly, D. H., Des Moines (Denver, Colo.).....Lt. Col., A.U.S.
Klocksiem, H. L., Des Moines.....Lt. (jg), U.S.N.R.
Kottke, E. E., Des Moines (Temple, Texas).....Capt., A.U.S.
Landis, S. N., Des Moines (West Palm Beach, Fla.) .....1st Lt., A.U.S.
La Tona, Salvatore, Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Lederman, James, Des Moines.....1st Lt., R.C.A.
Lehman, E. W., Des Moines (Memphis, Tenn.)....Major, A.U.S.
Lovejoy, E. P., Des Moines (Mare Island, Cal.) .....Lt. Comdr., U.S.N.R.
Maloney, P. J., Des Moines (Fort Lewis, Wash.)...1st Lt., A.U.S.
Marquis, G. S., Des Moines (Chicago, Ill.)..Lt. Comdr., U.S.N.R.
Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.
Mauritz, E. L., Des Moines (APO 668, New York, N. Y.) .....1st Lt., A.U.S.
McCoy, H. J., Des Moines (Iowa City, Iowa)...Comdr., U.S.N.R.
McDonald, D. J., Des Moines (March Field, Cal.).Capt., A.U.S.
McNamee, J. H., Des Moines (Seattle, Wash.) .....Lt. Comdr., U.S.N.R.
Mencher, E. W., Des Moines.....1st Lt., A.U.S.
Merkel, B. M., Des Moines (Colorado Springs, Colo.) .....Major., A.U.S.
Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.) .....Capt., A.U.S.
Morden, R. P., Des Moines (Edgewood Arsenal, Md.) .....1st Lt., A.U.S.
Murphy, J. H., Des Moines (San Diego, Cal.).....Lt., U.S.N.R.
Nelson, A. L., Des Moines (Camp Livingston, La.) Capt., A.U.S.
Noun, L. J., Des Moines (Fleet PO, New York, N. Y.) .....Lt. (jg), U.S.N.R.
Noun, M. H., Des Moines (APO 871, New York, N. Y.) .....Major, A.U.S.
Nourse, M. H., Des Moines (Bethesda, Md.)..Lt. (jg), U.S.N.R.
Patton, B. W., Des Moines (Camp Robinson, Ark.).....1st Lt., A.U.S.
Pearlman, L. R., Des Moines (APO Seattle, Wash.) .....1st Lt., A.U.S.
Peisen, C. J., Des Moines (Camp Perry, Ohio)..1st Lt., A.U.S.
Penn, E. C., West Des Moines (Spokane, Wash.) .....1st Lt., A.U.S.
Pfeiffer, E. P., Des Moines (Springfield, Mo.)....Capt., A.U.S.
Phillips, A. B., Des Moines (Corpus Christi, Texas) .....Lt., U.S.N.R.
Porter, R. J., Des Moines (Orlando, Fla.).....1st Lt., A.U.S.
Powell, L. D., Des Moines (Long Beach, Cal.)...Comdr., U.S.N.R.
Pratt, E. B., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Priestley, J. B., Des Moines (Camp Phillips, Kan.)..Major, A.U.S.
Purdy, W. O., Des Moines (Camp Howze, Texas)..Capt., A.U.S.
Riegelman, R. H., Des Moines (APO 634, New York, N. Y.) .....Major, A.U.S.
Robinson, V. C., Des Moines (Tampa, Fla.)....Capt., A.U.S.
Rotkow, M. J., Des Moines (Louisville, Ky.)....1st Lt., A.U.S.
Schaeferle, M. J., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Schlaser, V. L., Des Moines (Bethesda, Md.).....Lt. U.S.N.R.
Shepherd, L. K., Des Moines (APO New York, N. Y.) .....1st Lt., A.U.S.
Shifler, H. K., Des Moines (APO New York, N. Y.).Capt., A.U.S.
Singer, P. L., Des Moines (Camp Grant, Ill.)..1st Lt., A.U.S.
Skultety, J. A., Des Moines (Brownsville, Texas) .....1st. Lt., U.S.P.H.S.
Smead, H. H., Des Moines (Bangor, Me.).....Capt., A.U.S.
Smith, H J., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Smith, R. T., Des Moines (Meridian, Miss.)....1st Lt., A.U.S.
Snodgrass, R. W., Des Moines (Fort Rosecrans, Cal.) .....Capt., A.U.S.
Snyder, G. E., Grimes (Camp Robinson, Ark.).....Major, A.U.S.
Sohm, H. A., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.
Sorensen, R. M., Des Moines (Topeka, Kan.).Major, U.S.P.H.S.
Springer, F. A., Des Moines (Treasure Island, Cal.) .....Lt. Comdr., U.S.N.R.
Stearns, A. B., Des Moines (Denver, Colo.)..Major, A.U.S.
Stickier, Robert, Des Moines (Fort Benning, Ga.) 1st. Lt., A.U.S.
Stitt, P. L., Des Moines (Seattle, Wash.)....Lt. (jg), U.S.N.R.
Throckmorton, J. F., Des Moines (Camp Howze, Texas) .....Capt. A.U.S.
Toubes, A. A., Des Moines (Greenville, Miss.)..1st Lt., A.U.S.
Turner, H. V., Des Moines (Camp Robinson, Ark.) .....1st. Lt., A.U.S.
Updegraff, Thomas, Des Moines (Spokane, Wash.) 1st Lt., A.U.S.
Van Hale, L. A., Des Moines (Transfer, Penn.)....1st Lt., A.U.S.
Vaubel, E. K., Des Moines (Portland, Ore.).....Capt., A.U.S.
Wagner, E. C., Des Moines (Washington, D. C.)..1st Lt., A.U.S.
Willett, W. M., Des Moines (Fort Bragg, N. C.)..1st Lt., A.U.S.
Wirtz, D. C., Des Moines (Great Lakes, Ill.)..Lt. Comdr., U.S.N.R.
Zarchy, A. C., Des Moines (Camp Cook, Cal.).....Capt., A.U.S.

Pottawattamie County

‡Beaumont, F. H., Council Bluffs (APO 34, New York, N. Y.) .....Major, A.U.S.
Cogley, J. P., Council Bluffs (APO 439, Los Angeles, Cal.) .....Major, A.U.S.
Collins, R. M., Council Bluffs (San Diego, Cal.)....Lt., U.S.N.R.
Dean, A. M., Council Bluffs (Pensacola, Fla.) .....Lt. Comdr., U.S.N.R.
Hennessy, J. D., Council Bluffs (Chicago, Ill.)..Lt., U.S.N.R.
Jensen, A. L., Council Bluffs (APO 452, San Francisco, Cal.) .....Lt. Col., A.U.S.
Klok, G. J., Council Bluffs (Athol, Idaho)....Lt. (jg), U.S.N.R.
Kurth, C. J., Council Bluffs (Camp Crowder, Mo.).1st Lt., A.U.S.
Limbert, E. M., Council Bluffs (Camp Carson, Colo.) .....Capt. A.U.S.
Maiden S. D., Council Bluffs (San Francisco Cal.) .....Major, A.U.S.

Martin, L. R., Council Bluffs (Camp Rucker, Ala)..Capt., A.U.S.
Moskovitz, J. M., Council Bluffs (Camp Lockett Cal.) .....Capt., A.U.S.
Sternhill, Isaac, Council Bluffs (APO 3552, Seattle, Wash.) .....Capt., A.U.S.
Tinley, R. E., Council Bluffs (APO New York, N. Y.) .....Capt., A.U.S.
Treynor, J. V., Council Bluffs (South Bend, Ind.) .....Lt. Comdr., U.S.N.R.
Wieseler, R. J., Avoca (McChord Field, Wash.).....A.U.S.
Wurl, O. A., Council Bluffs (APO 871, New York, N. Y.) .....Capt., A.U.S.

Poweshiek County

Brobyn, T. E., Grinnell (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.
Hickerson, L. C., Brooklyn (Oxnard, Cal.).....1st. Lt., A.U.S.
Korfmacher, E. S., Grinnell (San Francisco, Cal.) .....Capt., A.U.S.
Niemann, T. V., Brooklyn (Camp Shelby, Miss.) .....1st Lt., A.U.S.
Parish, J. R., Grinnell (Treasure Island, Cal.) .....Lt. Comdr., U.S.N.R.

Ringgold County

Seaman, C. L., Mount Ayr (Van Buren, Ark.)..Capt., A.U.S.

Sac County

Bassett, G. H., Sac City (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
Deters, D. C., Schaller (APO 1001, New York, N. Y.) .....Capt., A.U.S.
Evans, W. L, Sac City (Camp Hood, Texas)..1st Lt., A.U.S.
Klocksiem, R. G., Odebolt (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Neu, H. N., Sac City (Portland, Ore.).....Major, A.U.S.

Scott County

Baker, R. W., Davenport (Rock Island, Ill.)..1st Lt., A.U.S.
Balzer, W. J., Davenport (APO Seattle, Wash.)..1st Lt., A.U.S.
Block, L. A., Davenport (APO New York, N. Y.)..Major, A.U.S.
Bishop, J. F., Davenport (APO 972, Seattle, Wash.) .....1st Lt., A.U.S.
Boden, W. C., Davenport (APO 3760, New York, N. Y.) .....Capt., A.U.S.
Brown, D. H., Davenport (Carlisle Barracks, Pa.)..Capt., A.U.S.
Brown, M. J., Davenport (Camp Hale, Colo.).....Capt., A.U.S.
Carey, E. T., Davenport (Fort Devens, Mass.)..1st Lt., A.U.S.
Christiansen, C. C., Dixon (APO 1104, San Francisco, Cal.) .....1st Lt., A.U.S.
Cummins, G. M., Jr., Davenport.....1st Lt., A.U.S.
Decker, C. E., Davenport (Oklahoma City, Okla.) .....1st Lt., A.U.S.
Evans, H. J., Davenport (Colorado Springs, Colo.).Capt., A.U.S.
Gibson, P. E., Davenport (Palm Springs, Cal.).....Capt., A.U.S.
Hurevitz, H. M., Davenport (APO New York, N. Y.).Capt., A.U.S.
Hurteau, Everett, Davenport (APO New York, N. Y.) .....1st Lt., A.U.S.
Hurteau, W. W., Davenport (Camp Barkeley, Texas) .....Major, A.U.S.
Kimberly, L. W., Davenport (New Orleans, La.).Capt., A.U.S.
Krakauer, Max, Davenport (Fort Hayes, Ohio)....1st Lt., A.U.S.
LaDage, L. H., Davenport (Camp Campbell, Ky.)..Capt., A.U.S.
Lorfeld, G. W., Davenport (Fort Myers, Fla.)....Capt., A.U.S.
Marker, J. I., Davenport (Camp Carson, Colo.)..Col., A.U.S.
McMeans, T. W., Davenport (APO New York, N. Y.) .....1st Lt., A.U.S.
Neufeld, R. J., Davenport (Rock Island, Ill.)..1st Lt., A.U.S.
Sheeler, I. H., Davenport (Omaha, Neb.).....1st Lt., A.U.S.
Smazal, S. F., Davenport (Pando, Colo.).....1st Lt., A.U.S.
Sorenson, A. C., Davenport (Oakland, Cal.)..Lt. Comdr., U.S.N.R.
Sunderbruch, J. H., Davenport (Paris, Texas)....1st Lt., A.U.S.
Weinberg, H. B., Davenport (Fort Benning, Ga.)..Major, A.U.S.
Zukerman, C. M., Bettendorf (Camp Carson, Colo.).Capt., A.U.S.

Shelby County

Bisgard, C. V., Harlan (Farragut Air Base, Idaho) .....Lt. Comdr., U.S.N.R.
Griffith, W. O., Shelby.....A.U.S.
McGowan, J. P., Harlan (San Diego, Cal.)..Lt. Comdr., U.S.N.R.

Sioux County

Gleysteen, R. R., Alton (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Grossmann, E. B., Orange City (Fort Sam Houston, Texas) .....1st Lt., A.U.S.
Larsen, M. O., Hawarden (Camp Bowie, Texas)..Major, A.U.S.

Story County

Conner, J. D., Nevada (Camp Robinson, Ark.)....1st Lt., A.U.S.
Fellows, J. G., Ames (Ft. Leonard Wood, Mo.).....Capt., A.U.S.
Lekwa, A. H., Story City (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
McFarland, G. E., Jr., Ames (San Pedro, Cal.)....Lt., U.S.N.R.
McFarland, J. E., Ames (Farragut, Idaho)..Lt. Comdr., U.S.N.R.
Rosebrook, L. E., Ames (San Antonio, Texas).....1st Lt., A.U.S.
Sperow, W. B., Nevada (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
Thorburn, O. L., Ames (Las Vegas, Nevada)..Major, A.U.S.

Tama County

Bezman, H. S., Traer (Carlisle Barracks, Pa.).....1st Lt., A.U.S.
Boller, G. C., Traer (Camp Bowie, Texas)
Dobias, S. G., Chelsea (APO 937, Seattle, Washington)
Havlik, A. J., Tama (Fleet PO, San Francisco, Cal.).Lt., U.S.N.R.
Schaeferle, L. G., Gladbrook (Fort Leonard Wood, Mo.)
Standefer, J. M., Tama (San Diego, Cal.)

Taylor County

Hardin, J. F., Bedford (Fort Leonard Wood, Mo.)

Union County

Paragas, M. R., Creston (Avon Park, Fla.).....Capt., A.U.S.
Ryan, C. J., Creston (Scribner, Neb.).....1st Lt., A.U.S.

Wapello County

Brentan, Emanuel, Ottumwa (APO 252, New York, N. Y.) .....1st Lt., A.U.S
Brody, Sidney, Ottumwa (APO New York, N. Y.)..Major, A.U.S
Gilfillan, C. D. N., Eldon (Battle Creek, Mich.)....1st Lt., A.U.S.
Hughes, R. O., Ottumwa (Coronado, Cal.)..Lt. Comdr., U.S.N.R.
Moore, G. C., Ottumwa (Carlisle Barracks, Pa.)....1st Lt., A.U.S.
Nelson, F. L., Jr., Ottumwa (Camp Gruber, Okla.)..Capt., A.U.S.
Prewitt, L. H., Ottumwa (March Field, Cal.).....Major, A.U.S.
Selman, R. J., Ottumwa (El Paso, Texas).....Lt. Col., A.U.S.
Struble, G. C., Ottumwa (Fort Harrison, Ind.)....Lt. Col., A.U.S.
Whitehouse, W. N., Ottumwa (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Worley, C. L., Ottumwa (Camp Young, Cal.).....Capt., A.U.S.

Warren County

Fullgrabe E. A., Indianola (Bethesda, Md.) Lt. (jg), U.S.N.R.
Hoffman, G. R., Lacona (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.
Shaw, E. E., Indianola (Ancon, Canal Zone).....Capt., A.U.S.
Trueblood, C. A., Indianola (Camp Campbell, Ky.)..Capt., A.U.S.

Washington County

Boice, C. L., Washington (Floyd Bennett Field, N. Y.) .....Lt. (jg), U.S.N.R.
Droz, A. K., Washington (Grosse Ile, Mich.).Lt. Comdr., U.S.N.R.
Mast, T. M., Washington (Portland, Ore.).....Lt. U.S.N.R.
Stutsman, R. E., Washington (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Ware, S. C., Kalona (Fort Meade, Md.).....Capt., A.U.S.

Wayne County

Hyatt, C. N., Jr., Humeston (Indio, Cal.).....Capt., A.U.S.

Webster County

Baker, C. J., Fort Dodge (APO New York, N. Y.)...Capt., A.U.S.
Burch, E. S., Dayton (Camp Livingston, La.).....Capt., A.U.S.
Burleson, M. W., Fort Dodge (Vancouver, Wash.,..1st Lt., A.U.S.
Coughlan, C. H., Fort Dodge (Jefferson Barracks, Mo.) .....Major, A.U.S.
Dawson, E. B., Fort Dodge (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Glesne, O. N., Ft. Dodge (Great Lakes, Ill.)..Lt. Comdr., U.S.N.R.
Joyner, N. M., Fort Dodge (Brooklyn Field, Ala.)
Kluever, H. C., Fort Dodge (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Larsen, H. T., Fort Dodge (Baltimore, Md.)...Lt. (jg), U.S.N.R.
Shrader, J. C., Fort Dodge (APO 460, Los Angeles, Cal.) .....Major, A.U.S.
Thatcher, O. D., Fort Dodge (Lake Charles, La.)....Capt., A.U.S.
Thatcher, W. C., Fort Dodge (APO, New York, N. Y.) .....Capt., A.U.S.
Van Patten, E. M., Ft. Dodge (Alamogordo, N. M.).1st Lt., A.U.S.

Winneshiek County

Fritchen, A. F., Decorah (APO San Francisco, Cal.) .....Comdr., U.S.N.R.
Hospodarsky, L. J., Ridgeway (Seattle, Wash.)..Capt., A.U.S.
Larson, L. E., Decorah (Farragut, Idaho).....Lt., U.S.N.R.
Svendsen, R. N., Decorah (San Diego, Calif.)..Lt. (jg) U.S.N.R.
Van Besien, G. J., Decorah (Fort Leavenworth, Kan.) .....1st Lt., A.U.S.

Woodbury County

Bettler, P. L., Sioux City (APO San Francisco, Cal.) .....Major, A.U.S.
Blackstone, M. A., Sioux City (Pittsburg, Cal.).1st Lt., A.U.S.
Boe, Henry, Sioux City (Salina, Kan.).....Capt., A.U.S.
Burroughs, H. H., Sioux City.....Lt. (jg), U.S.N.R.
*Cmeyla, P. M., Sioux City (APO San Francisco, Cal.) .....Capt., A.U.S.
Cowan, J. A., Sioux City (Oklahoma City, Okla.) .....Major, U.S.P.H.S.
Crowder, R. E., Sioux City (San Diego, Cal.).Lt. Comdr., U.S.N.R.
Dimsdale, L. J., Sioux City (Clinton, Iowa).....1st Lt., A.U.S.
Down, H. I., Sioux City (Camp Breckenridge, Ky.) Major, A.U.S.
Elson, V. J., Danbury (APO 702, Seattle Wash.)....Capt., A.U.S.
Frank, L. J., Sioux City (Mare Island, Cal.).Lt. Comdr., U.S.N.R.
Graham, J. W., Sioux City (San Diego, Cal.).Lt. Comdr., U.S.N.R.
Grossman, Milton, Sioux City (Hobbs, N. M.)..Capt., A.U.S.
Heffernan, C. E., Sioux City (Salt Lake City, Utah) .....1st Lt., A.U..S
Hicks, W. K., Sioux City (Fort Riley, Kan.)..Major, A.U.S.
Honke, E. M., Sioux City (Palm Springs, Cal.)..Capt., A.U.S.
Kaplan, David, Sioux City (Fort Bragg, N. C.)..1st Lt., A.U.S.
Knott, R. C., Sioux City (Webster Grove, Mo.).....Capt., A.U.S.
Krigsten, W. M., Sioux City (Springfield, Mo.)..Lt. Col., A.U.S.
Lande, J. N., Sioux City (El Paso, Texas).....Major, A.U.S.
Martin, R. F., Sioux City (Camp Atterbury, Ind.).1st Lt., A.U.S.
Mattice, L. H., Danbury (Fort Lewis, Wash.).....1st Lt., A.U.S.
McCuistion, H. M., Sioux City (APO New York, N. Y.) .....Capt., A.U.S.
Mugan, R. C., Sioux City (Gowen Field, Idaho)..1st Lt., A.U.S.
Osincup, P. W., Sioux City (Edgewood Arsenal, Md.) .....1st Lt., A.U.S.
Rarick, I. H., Sioux City (APO 980, Seattle, Wash.)..Capt., A.U.S.
Reeder, J. E., Jr., Sioux City (Modesto, Cal.)....Capt., A.U.S.
Ryan, M. J., Sioux City (Topeka, Kan.).....Capt., A.U.S.
Schwartz, J. W., Sioux City (Camp Crowder, Mo.).Major, A.U.S.
Tracy, J. S., Sioux City (Ephrata, Wash.).....Capt., A.U.S.
Wilson, L. L., Sioux City (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.

Worth County

Westly, G. S., Manly (Ft. Leonard Wood, Mo.)..Major, A.U.S.

Wright County

Aageson, C. A., Dows
Bird, R. G., Clarion (San Diego, Cal.).....Lt. Comdr., U.S.N.R.
Doles, E. A., Clarion (Phoenix, Ariz.)
Leinbach, S. P., Belmond (Farragut Air Base, Idaho)
Missildine, W. H., Eagle Grove (APO 25, San Francisco, Cal.) ..... Capt., A.U.S.

(*) Reported missing in action.
(†) Reported killed in action.
(‡) Reported prisoner of war.

WOMAN'S AUXILIARY NEWS

Mrs. Keith M. Chapler, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—Mrs. W. S. Reiley, Red Oak
President-Elect—Mrs. J. C. Decker, Sioux City
Secretary—Mrs. A. G. Felter, Van Meter
Treasurer—Mrs. A. E. Merkel, Des Moines

THE 1943 STATE CONVENTION

The Fourteenth Annual Convention of the Woman's Auxiliary to the Iowa State Medical Society was held in Des Moines, April 29 and 30, 1943, at Hotel Kirkwood.

Mrs. F. W. Mulsow of Cedar Rapids, President, presided over the meetings. On Thursday morning state board members and county auxiliary presidents presented their reports. Because of the war situation, membership was found to have decreased to 336, a loss of approximately 100 members. This decrease prevented the award of the Gertrude Downing cup this year. A luncheon followed this meeting.

On Friday morning the state board members and county auxiliary presidents made their annual reports. Some of these reports are printed in this issue and the rest will follow in future issues of the Woman's Page. An allowance of $100.00 was made for the Nurses Loan Fund. A registration of 94 members was reported.

Dr. Ransom D. Bernard, Clarion, spoke on The Present Trend of Medical Legislation. He emphasized the magnitude of the subject and showed how intricate the coordination of law and medicine is. "The Cradle to the Grave Plan" is little more than socialized medicine, and the war emergency will only entrench it more firmly when peace finally comes. Although the plan has its good points, it should not be forgotten that preventive medicine should be the realm of the United States Department of Public Health and curative medicine that of physicians. Iowa has fairly good basis science, prenatal, and premarital laws. The recently proposed immunization legislation in this state was not carried through because there is already a law empowering the State Department of Health with authority to compel vaccination in a school in the event of an epidemic. It may be simpler but not as sensible to close the barn door after the horse has run away!

Dr. Bernard's talk was followed with a splendid program by the Iowa Methodist Hospital Glee Club, directed by Mrs. Lena Hanson.

At the luncheon Dr. Frank P. Winkler of Sibley, President of the Iowa State Medical Society, spoke briefly concerning the importance of a doctor's wife, whose first duty is the home and being a successful ally to her husband. He commended the work of the Auxiliary in its varied fields and stressed the value of unity when more than 700 of Iowa's 2,700 doctors are at war and duties are doubled and tripled for those at home.

Dr. Lee R. Woodward of Mason City, President-Elect of the Iowa State Medical Society, reiterated that our total aim at present is to win the war and that "there is something fundamentally necessary in work." Women are doing many varieties of work which they have never done before and, like the Russian women, their fields will be extended as time goes on.

Dr. James C. Hill of Newton, Chairman of the Advisory Committee to the Auxiliary, maintained that doctors' wives are copartners in their husbands' work and are equally responsible for their success, and, fortunately, successes usually exceed failures. Doctors' wives are leaders in their communities and consequently know both the bitter and the sweet fruits of being always in the public eye.

Dr. Carl F. Jordan, Des Moines, made the main address on the topic, The State Department of Health and the Blood Donor Program. He showed how the State Department of Health is cooperating with hospitals and doctors in this fine program. Excellent support has been given all over the state. It was necessary to make three trips to Fort Madison where three hundred men volunteered as donors. This is a permanent work and will have an assured growth and usefulness ofter the war.

Two patriotic skits were well presented by members of the War Savings Staff in Des Moines.

Six former state presidents of the Auxiliary were present: Mrs. W. A. Seidler, Jamaica; Mrs. J. A. Downing, Des Moines; Mrs. M. C. Hennessy, Council Bluffs; Mrs. S. E. Lincoln, Des Moines; Mrs. E. T. Warren, Stuart; and Mrs. W. R. Hornaday, Des Moines.

The following officers were elected for the coming year and installed by Mrs. S. E. Lincoln: Mrs. W. S. Reiley, Red Oak, president; Mrs. J. C. Decker, Sioux City, president-elect; Mrs. S. S. Westly, Manly, first vice president; Mrs. R. S. Moth, Council Bluffs, second vice president; Mrs. R. E. Parry, Scranton, third vice president; Mrs. H. M. Pahlas, Dubuque, fourth vice president; Mrs. A. G. Felter, Van Meter, secretary; and Mrs. A. E. Merkel, Des Moines, treasurer. The directors are: Mrs. F. W. Mulsow, Cedar Rapids; Mrs. W. R. Hornaday, Des Moines; and Mrs. E. T. Warren, Stuart.

Mrs. K. M. Chapler,
Chairman, Press and Publicity Committee

A LAST WORD

There was a vacant place at the luncheon of the Board of Directors at the State Convention on April 29 at the Kirkwood Hotel in Des Moines. Mrs. E. L. Bower, second state president of the Woman's Auxiliary to the Iowa State Medical Society and historian for many years, had gone on a few days before to keep an eternal engagement with her Maker and her doctor husband who left not quite a year ago.

There were many at the fourteenth annual convention who remarked about Mrs. Bower's absence, who remembered her enthusiatic devotion to the Auxiliary and to all things which might be beneficial to humanity. There were many who remembered how she loved children; how much she was interested in personality; and how firmly and fearlessly she would stand "until the last gun" to support her dreams and ideals. Not many are chosen to enjoy the blessings and heartbreak which more than eighty years can bring; there are not many who manage to keep mentally and spiritually alert during such a long life span. The Auxiliary and all other organizations to which Mrs. Bower lent her enthusiasm and energy were greatly inspired and benefited because she was with them a little while. And, somehow, we have the feeling that Mrs. Bower's first request "on the other side" must have been: "Here I am, Lord, what is my work?"

Mrs. K. M. Chapler

REPORT OF THE PRESIDENT

The Woman's Auxiliary to the Iowa State Medical Society was organized May 9, 1929. When we terminate our state convention today, we shall have concluded fourteen years.

We have a membership of 336 with 41 members-at-large and fifteen organized counties. No new counties have been organized this year, but we have 31 new members-at-large and one county contemplating organization.

Our organization should be counted as part of our war work in spite of how busy we are. Dr. Fred Rankin, President-Elect of the American Medical Association, urged the women to concentrate their efforts for the betterment of public health, asserting that would be the best contribution they could make to the war effort. "Fighting disease is as important as fighting the enemy."

Our Program Chairman suggested a most timely topic, "Doctors' Wives in War Service," and with her committee arranged an excellent program, as suggested by the National Program Committee, stressing immunization and nutrition.

Our Public Relations and Legislation Chairmen planned to cooperate in their work this year. They decided to support the smallpox legislation program to help banish this disease from our state. Excellent work was also done by some of our members in cancer control.

Our *Hygeia* Chairman worked strenuously this year to encourage a larger number of subscriptions, since the necessity for health education is felt, with so many doctors in service.

Our *Bulletin* Chairman urged all members to subscribe to the *Bulletin*, at least the county presidents and committee chairmen.

Our State War Bond Chairman urged all county auxiliaries to reach their quota for merit cards and to appoint a defense chairman. She stressed the woman's responsibility in seeing that war saving comes first.

We have taken our Nurses Loan Fund as one of our defense projects. Every doctor's wife in the state has been given the opportunity to contribute and thus help some worthy nurse to finish her training. The county auxiliaries contributed generously to the fund.

We are grateful to the State Medical Society for the News Page, which helps us keep in touch with the State Auxiliary Program. Articles by the county chairmen and standing committees have appeared each month.

The State Medical Society also generously donated $200.00 to our budget and made it possible for your president to visit the different auxiliaries. This year I visited the Cass, Dallas-Guthrie, Dubuque, Jackson, Montgomery, Polk, Pottawattamie, Upper-Des Moines, Worth, and Woodbury Auxiliaries. This will always be a pleasant memory of the past year. Meeting the wives of the doctors throughout the state and enjoying their hospitality was indeed a pleasure for which I am truly grateful.

All county auxiliaries have paid their dues and are maintaining their organizations.

I attended the national convention in Atlantic City from June 8 to 12, which was very instructive and enjoyable, and also the national board meeting in Chicago in November. It was an inspiration to meet the members from the different states and hear their reports.

Many of our doctors have gone into the service. This is affecting homes and auxiliaries. The Iowa auxiliaries, like others throughout the country, have been swept into defense work and are anxious to do their part. They are cooperating with the Red Cross in First Aid and Nutrition Classes, with United Service Organizations—anything that will fit in best and help win this war.

I want to express my appreciation for the many courtesies shown me, and to the office staff of the Iowa State Medical Society for the many kindnesses during the past year in furnishing advice and sending out letters, and to each and every member who has assisted me in any way.

Mrs. F. W. Mulsow, President

REPORT OF THE RESOLUTIONS COMMITTEE

Whereas, The Woman's Auxiliary to the Iowa State Medical Society in convention assembled has been the recipient of many courtesies,

Be It Resolved, That the Woman's Auxiliary express its appreciation to those who have extended their hospitality to us: To the following chairmen

and their committees—Miss Mable Sones, chairman of the Social Committee; Mrs. J. A. Downing, president of the Polk County Auxiliary; Mrs. H. D. Gray and Mrs. E. D. McClean, registrars; Mrs. J. B. Synhorst for decorations; Mrs. H. B. Henry, chairman of the historical exhibition of surgical instruments; the committee responsible for the housing and comfort of our convention; and Father R. J. Conley and the Iowa Methodist Hospital Glee Club and Mrs. Lena Hanson; and

Be It Further Resolved, That appreciation be expressed to Doctors Ransom D. Bernard, Frank P. Winkler, Lee R. Woodward, James C. Hill, and Carl F. Jordan for their presence and participation on our program; to Dr. James C. Hill and his Advisory Committee for their cooperation and advice throughout the year; to Miss Mary McCord and the personnel of the office of the Iowa State Medical Society for their assistance; to the press for its courtesy and consideration; to our President, Mrs. F. W. Mulsow, who has served so loyally and conscientiously during the past year; and to all other officers and standing committees and all unidentified persons whose thoughtfulness has made our convention a success.

Mrs. Carrol C. Nelson, Chairman
Mrs. Henry M. Pahlas
Mrs. Keith M. Chapler

REPORT OF THE BULLETIN COMMITTEE

Iowa subscriptions to the *Bulletin* for the concluding year, 1942-1943, total eleven. This is a small portion of our total membership of 332.

The *Bulletin* is the mouthpiece of our national organization. It contains all plans and messages from national officers and committee chairmen to local officers and committee chairmen. It also contains news of interest for all Auxiliary members.

We need the *Bulletin* and the *Bulletin* needs us.

Mrs. H. I. McPherrin, Chairman

REPORT OF THE PUBLIC RELATIONS COMMITTEE

For years the members of the Iowa State Medical Society heard about the deplorable smallpox record of our state. Committees studied the problem. Every doctor knew that where compulsory vaccination laws were enforced, smallpox was practically nonexistent. In 1941, the Iowa State Department of Health sponsored a vaccination bill. This failed, it was said, because it lacked the support of women's organizations.

At its fall convention (September, 1941) the board of the Iowa Federation of Women's Clubs passed a resolution ordering a bill for the compulsory vaccination against smallpox to be written by its legislative committee in collaboration with the Iowa State Department of Health, the bill to be introduced into the next assembly of the Iowa State Legislature. The State Department of Health was then informed concerning this action.

As early as February, 1942, talks on the need for compulsory vaccination against smallpox were being made to women's organizations; and many of you will remember that an appeal was made to this organization at its 1942 convention. During the summer, Mrs. Mulsow, our president, approved the suggestion of the public relations chairman that the state auxiliary committees on program, legislation, and public relations unite their efforts in promoting the proposed legislation. By the end of the summer the legislative chairman of the Iowa State Medical Society had been informed concerning our project. He gave his approval and offered legislative aid.

Soon after the fall session of the State Federation of Women's Clubs, its health committee sent The Smallpox Resolution to its constituent 900 clubs for their endorsement. The secretaries of 454 clubs signified their approval. These clubs were located in ninety-four counties and represented 18,000 women. To aid in informing our own members concerning smallpox and its prevention, our program chairman, Mrs. Seidler, included the topic "Immunization" in her larger outline of suggested program material; our legislative chairman, Mrs. Downing, urged upon our members that legislators be contacted by persons who could impress them with the importance of preventive medicine, especially through vaccination; and our public relations chairman sent State Health Department Smallpox Bulletins and President Roosevelt's 1942 May Day Proclamation to all county presidents and many past state presidents of our organization.

I should like here to thank Mrs. Mulsow and the members of my committee.

To you, Mrs. Mulsow, special thanks for taking to Governor Hickenlooper the printed information about vaccination which you wrote me he was glad to receive, and for calling upon Dr. Gardner, your representative. It is unfortunate that his willingness to help and his encouragement did not reach further than they did.

To my colleagues on the committee: Thanks to Mrs. Sternhill for her letter of encouragement from Fort Warren, Wyoming, where her husband was stationed. Thanks to Mrs. Westly who helped with smallpox vaccination in her own community during Immunization Week last fall.

Thanks to Mrs. McClure, who used the responsive reading smallpox bulletin in two meetings in her home town; and special thanks to Mrs. Woods, who had the grand idea of sending double postcards to the 900 Federated Iowa Women's Clubs and who addressed them and arranged the 454 returned cards by counties—a lot of work!

Thanks to all others for whatever you did to further the cause of compulsory vaccination against smallpox in Iowa.

In conclusion may I say that in this effort to put a vaccination law into the Iowa Statutes, we women missed the cooperation of the men, especially of those who had declared that our help was so necessary "to put it over", the Iowa State Medical Society and the State Department of Health. Let us hope that

some day we may work together to place Iowa among the states which know that prevention of disease is the first step in keeping a community well.

Mrs. Daniel J. Glomset, Chairman

REPORT OF THE NURSES LOAN FUND COMMITTEE

The following is the financial report of the Nurses Loan Fund which was approved at the annual meeting April 15, 1942:

Donations from County Auxiliaries—		
Polk	$ 25.00	
Cass	5.00	
Dallas-Guthrie	30.00	
Montgomery	5.00	
Sioux Mesdames	5.00	
Upper Des Moines	5.00	
Madison	5.00	$ 80.00
Earned by County Auxiliaries—		
Polk (Bridge Party)	$ 29.25	
Polk (Bridge Party)	22.90	
Polk (Tea)	4.25	56.40
Individual Gifts		48.00
Interest		.98
Total		$ 185.38

Mrs. W. R. Hornaday, Chairman

IOWA'S PLACE IN NURSE RECRUITMENT FOR THE ARMY AND NAVY*

Iowa is being asked to furnish 672 nurses to serve in the Army and Navy Nurse Corps as the state's part in the nationwide American Red Cross campaign to obtain 30,000 graduate registered nurses in 1943 to care for men in the armed forces.

This means an average of 56 a month for Iowa. In February 89 were assigned from the state to report to either the army or the navy.

Also, enrolled in the Red Cross War Reserve during February were 33 Iowa nurses, those whose credentials were accepted by national headquarters and who are available for army and navy service within six months. This is considered the state's backlog for future assignments and is not too substantial at this point.

Iowa has both its low and its high ratings in connection with the recruitment of nurses for the armed forces.

Unfavorable is the fact that only 15 per cent of the student nurses who are to complete their nursing courses within a year have enrolled in the Red Cross student reserve. Members of this reserve transfer into the war reserve when they complete their course and give an early date for their availability for army or navy service. Some states have enrolled 100 per cent for the student reserve.

The favorable rating is in Red Cross Home Nursing training. More than half the state's quota for such training in the fiscal year ending June 30 has been reached. A state that is sending large numbers of nurses to war service does well to strengthen its home front by training women as Red Cross nurse's aides and in home nursing.

As the army and navy increase in size and as the fighting men take on more responsibilities on all war fronts, the Nurse Corps also takes on more responsibilities. Overseas assignments are multiplying daily and it is the job of the Red Cross to provide enough nurses to care adequately for all troops overseas.

Qualified nurses, both married and single, between the ages of twenty-one and forty-five, may sign up in the Red Cross war reserve through Red Cross nurse recruiting stations. Most of the army and navy nurses are selected from this reserve. Already there are as many nurses in service as were assigned during all of World War I; and this number will be more than doubled before the end of the year. Army and navy nurses are serving in more than three hundred hospitals in continental United States, in eighteen countries abroad and on hospital ships for the Atlantic and Pacific fleet, the S. S. Relief and the S. S. Solace. The eighteen countries abroad include Africa, Alaska, Australia, China, England, Greenland, Hawaii, Iceland, India, Ireland, Jamaica, New Caledonia, Newfoundland, New Guinea, New Zealand, Panama, Puerto Rico, and Trinidad. The nurses' stations in the United States are at forts, camps, barracks, navy yards, training stations, quartermaster depots, disciplinary barracks, proving grounds, gunnery schools, air bases, and flying schools. Not only do the nurses look after soldiers, sailors, and marines, but also WAACs, WAVEs and SPARs.

Fifteen hundred army nurses have been assigned to the air evacuation units of the Army Nurse Corps, the newest of the services of the army nurses. Some of these nurses are trained to take charge of nursing service on transport planes for flying sick and wounded servicemen from the theaters of war back to general hospitals. Assigned to station hospitals at army airfields, the nurses so trained are given flying experience and are taught how to administer oxygen in the air. The planes will accommodate forty patients and are equipped with facilities for surgery, blood transfusions, and other emergency treatment.

"Iowa's record for February, assigning 89 nurses to the army and navy on a monthly quota of 56, is highly encouraging," is the message for the state given by Miss Myrtis Coltharp, director of Nursing Service, Midwestern Area, American Red Cross. "With the heavy foreign assignments being made at this time and the new large hospitals being erected, we dare not fall below the quotas set for us by the army and navy. I am sure we can count on Iowa to keep up its splendid assistance."

*From the American Red Cross Public Information Service.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.
WOI—Wednesdays at 2:05 p. m.

June 7- 9	Health on the Farm Front	George M. DeYoung, M.D.
June 14-16	Typhoid Fever	Chester L. Putnam, M.D.
June 21-23	Summer Skin Disorders	Edward J. Ringrose, M.D.
June 28-30	Obesity	Byron M. Biersborn, M.D.

SOCIETY PROCEEDINGS

Black Hawk County

A special meeting of the Black Hawk County Medical Society will be held Wednesday, June 2, at 6:30 p. m. at Black's Tea Room in Waterloo. J. Arthur Myers, M.D., Professor of Internal Medicine, Preventive Medicine and Public Health at the University of Minnesota Graduate School, will be the guest speaker at this last meeting of the current year. Dr. Myers will discuss Modern Methods in Tuberculosis Control. He is particularly well qualified to speak on this important wartime disease threat and to discuss its control. Dr. Myers' interest in the field of tuberculosis control and his many contributions to the scientific knowledge of the subject have given him nationwide renown as an authority.

J. L. Kestel, M.D., President

Clinton County

The Clinton County Medical Society met Thursday evening, May 13, at the Elks Club in Clinton. Raymond J. Jackman, M.D., of the Mayo Clinic, was the guest speaker for the evening.

Humboldt County

A joint meeting of the Humboldt County Medical Society and the Humboldt County Nursing Council of War Service was held Tuesday evening, May 11, in Humboldt. Subjects discussed during the meeting included the wartime use of gases, their effect, and the care of patients who have been gassed.

Johnson County

The Johnson County Medical Society held its regular monthly meeting Wednesday, May 5, at Hotel Jefferson in Iowa City. The meeting opened with dinner at six o'clock, following which George C. Albright, M.D., of the Department of Otolaryngology discussed The Aching Ear. He emphasized some points in the diagnosis and care of the patient with earache and described an improved method of aftercare in mastoidectomy. Dean M. Lierle, M.D., Professor of Otolaryngology, discussed The Right to Hear. Dr. Lierle also presented a movie dealing primarily with the testing of hearing of school children.

A. L. Sahs, M.D., Secretary

Scott County

The May meeting of the Scott County Medical Society was held Tuesday, May 4, at 6:00 p. m. at the Lend-A-Hand Club in Davenport. Guests of the evening were Colonel Winn and Colonel Dyke of the Schick General Hospital in Clinton. Colonel Winn, commanding officer of the hospital, discussed Army General Hospitals, Their Organization and Function.

L. J. Miltner, M.D., Secretary

Taylor County

The regular monthly meeting of the Taylor County Medical Society was held at Hotel Lenox in Lenox Tuesday evening, May 11. Following dinner a business meeting and scientific program were held. A recorded medical lecture, The Making of a Diagnosis by David P. Barr, M.D., of New York, was presented and discussed by members of the society.

Iowa Medical Women

The annual meeting of the State Society of Iowa Medical Women was held in Des Moines Wednesday, April 28. Ruth E. Church, M.D., of Washington spoke on the Public Health Unit in Washington County; and the following officers were elected to serve the society during the year: Dr. Christine S. Erickson-Hill of Council Bluffs, president; Dr. Helen Johnston of Des Moines, president-elect; Dr. Gladys A. Cooper of Red Oak, vice president; Dr. Erma A. Smith of Ames, secretary; and Dr. Edna K. Sexsmith-Harper of Greenfield, treasurer.

Erma A. Smith, M.D., Secretary

PERSONAL MENTION

The Journal wishes to make a correction in the announcement which appeared in this column in the May issue stating that Dr. Ward A. DeYoung had resumed practice in George after receiving a medical discharge from the army. It was Dr. George M. DeYoung who resumed his practice in George. Dr. Ward A. DeYoung, who is still serving with the Army of the United States, has been stationed at Camp Crowder, Missouri, and has the rank of Captain in the Medical Corps. Dr. Ward A. DeYoung was formerly in practice in Glenwood.

Dr. **Harold W. Morgan** of Mason City was the guest speaker at a meeting of the Woman's Club of Greene Tuesday evening, April 21. The topic of Dr. Morgans address was Health in Wartime.

Dr. **Olan R. Hyndman**, associate professor of surgery at the State University of Iowa College of Medicine, and chief of the neurosurgical service at the University Hospital, has resigned to take over the practice of Dr. J. R. Jaeger in Denver, Colorado. Dr. Jaeger has been assistant professor of surgery (neurosurgery) at the University of Colorado College of Medicine.

Dr. Dorothy H. Thompson has accepted a position as medical anesthetist at the Mercy Hospital in Council Bluffs replacing Dr. Earl Weir, who resigned that position last month. Dr. Thompson was graduated in 1937 from the University of Nebraska College of Medicine and has served as a staff member

at the New England Hospital for Women and Children in Boston, the Crippled Children's Hospital in Oklahoma City, and the Truesdale Hospital in Boston.

Dr. Nicholas Schilling of New Hampton spoke before the Rotary Club af Charles City at its noon meeting Monday, May 3. Dr. Schilling's talk on Tobacco was based on his years of experience as a physician.

Dr. John E. Christiansen of Durant spoke before the Wilton Township Farm Bureau at a meeting in Wilton Junction Friday evening, May 7. Dr. Christiansen discussed the need for physical examinations and vaccinations.

Dr. Allen J. Ryan has located in Harlan for the practice of medicine. Dr. Ryan was graduated in 1941 from the Creighton University School of Medicine, following which he completed an internship of one year at St. Catherine's Hospital and a residency of one year at the Douglas County Hospital in Omaha.

Dr. J. Carl Painter of Dubuque was the guest speaker at a meeting of Our Lady's Circle, a unit of the Catholic Mothers Study Club of Dubuque, Thursday evening, April 17. Dr. Painter spoke on Tuberculosis and illustrated his discussion with slides showing the various stages of the disease and the scientific methods of combating its ravages.

Dr. Eugene J. Knopf of Hubbard has accepted a position in Chicago as head of the department of medicine and surgery for an industrial firm engaged in government work. Dr. Knopf has been located in Hubbard for the past seven years.

Dr. Frank P. McNamara of Dubuque spoke before the members of the Third District of the Iowa State Association of Registered Nurses at their meeting Monday, May 10, at Mercy Hospital in Dubuque. The Value of Cancer Education of the Women's Field Army was the topic of Dr. McNamara's discussion.

Dr. Loraine W. Ward has joined the Shellito and Agnew Clinic in Independence where he will continue the general practice of medicine. Dr. Ward was located in Fairbank for several years before moving to Independence.

MARRIAGE

Miss Helen Donahue, daughter of Mrs. Anne Donahue of Davenport, and Dr. Stanley F. Smazal, formerly of Davenport, were united in marriage Monday, May 10, in Davenport. Dr. Smazal is now a First Lieutenant in the Medical Corps of the Army of the United States and recently has been stationed at Camp Hale, Colorado.

DEATH NOTICES

Corcoran, Louis Leonard, of Rock Rapids, aged sixty-seven, died May 18 after an extended illness following a heart attack. He was graduated in 1907 from the Northwestern University Medical School, and at the time of his death was a member of the Lyon County Medical Society.

Hermence, George Earl, of Marshalltown, aged fifty-four, died April 25 of a cerebral hemorrhage. He was graduated in 1912 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Marshall County Medical Society.

Hoegen, Joseph Alton, of Wyoming, aged forty-nine, died May 8 following an extended illness. He was graduated in 1915 from the New York Medical College in New York City, and at the time of his death was a member of the Jones County Medical Society.

Neufeld, Frank, of Davenport, aged sixty-eight, died May 1 following an illness of one week. He was graduated in 1901 from Creighton University School of Medicine, and at the time of his death was a member of the Scott County Medical Society.

Oldag, George Charles, of Paullina, aged sixty-four, died May 14 following an extended illness. He was graduated in 1907 from the State University of Iowa College of Medicine, and at the time of his death was a member of the O'Brien County Medical Society.

Smith, Frank Salmeron, of Nevada, aged ninety, died May 18 following an illness of several months. He was graduated in 1882 from Rush Medical College in Chicago, and at the time of his death was a life member of the Story County and Iowa State Medical Societies.

Sollenbarger, George Hartley, of Corydon, aged seventy-two, died May 14 of a heart attack. He was graduated in 1898 from the University of Illinois College of Medicine, and at the time of his death was a life member of the Wayne County and Iowa State Medical Societies.

Walker, Evon, of Ottumwa, aged sixty-five, died suddenly May 17 of a heart attack. He was graduated in 1905 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Wapello County Medical Society.

History of Medicine in Iowa

Edited by the Historical Committee

Dr. Walter L. Bierring, Des Moines, Chairman
Dr. Henry G. Langworthy, Dubuque, *Secretary*
Dr. John T. McClintock, Iowa City
Dr. Murdoch Bannister, Ottumwa
Dr. Frank E. Sampson, Creston

A History of Medicine in Plymouth County

Wendell L. Downing, M.D.
Le Mars, Iowa

(Continued from last month)

Dr. William E. Cody of Sioux City was born in Sioux City in 1888. After attending high school there, he was graduated in 1911 from the University of Iowa College of Medicine. After practicing for four years in Kingsley, Dr. Cody located in Merrill in 1914. In 1917 he enlisted in the Army Medical Corps and was a First Lieutenant. After his army service, he spent a year in graduate work in surgery in Baltimore and Boston. In 1920 he located in Sioux City where he limits his practice to surgery. Dr. Cody is a Fellow of the American College of Surgeons and is a member of the staffs of the Sioux City hospitals. Dr. and Mrs. Cody have one daughter, a college sophomore; one son died in childhood.

Dr. Armand Naffziger was born in Illinois on May 8, 1876, and attended school there. After graduating from Northwestern University in 1895, he was in business in a wholesale drug concern for ten years. Dr. Naffziger then attended medical school and was graduated in 1904 from the University of Illinois College of Medicine. For eight years he was located in Wayne, Nebraska; for one year in Florida; and after taking special work in Omaha, he located in Merrill in 1915. In 1901 he was married to Minerva Thompson. About 1927 Dr. Naffziger moved to Chicago, where he now lives.

Dr. Clifford V. Allen of Longview, Washington, was born in Akron, Iowa, on March 25, 1908. He was graduated in 1933 from the University of Iowa College of Medicine. After an internship of one year in San Jose Hospital in San Jose, California, he was located in Merrill, Iowa, for one year. Dr. Allen was then associated with the Le Mars Clinic for one year. In 1936 he joined the United States Public Health Service and was stationed at the McNeil Prison, McNeil, Washington. In 1938 he moved to Longview, Washington, where he has since been associated with the Columbia Clinic. In 1934 Dr. Allen was married to Helen Simms, R.N., of San Jose.

Dr. R. J. Carlson of Merrill was born December 25, 1894, in Sioux City. He attended high school in Sioux City and received his Bachelor of Science degree in chemistry in 1921 at the University of Iowa. From 1921 until 1929 he was engaged in high school teaching and in 1933 he was graduated from the University of Iowa College of Medicine. After one year of internship at the Covenant Hospital, Chicago, Dr. Carlson practiced in Hawarden, Iowa, for two years. In 1936 he located in Merrill, where with his wife and family he is now in practice.

REMSEN

The name for the town of Remsen was selected from the middle name of William Remsen Smith of Sioux City, a pioneer physician of that city. While Dr. Smith never lived in Remsen, he did have extensive land holdings there. Remsen was platted as a townsite in 1876.

One of the earliest Remsen physicians was a Doctor Arbuthnot, a graduate of the Keokuk Medical College, who located in Remsen in 1883. After a few years he moved to Nebraska.

Dr. Henry Brink, a graduate of the New York University College, came from Warren, Illinois, to Remsen in 1883. About 1885 he moved away and later died in Doon, Iowa.

Dr. James I. Marsden, a graduate of the New York University College of Medicine, located in Remsen in 1884 and one year later moved to Denver, Colorado.

Dr. Seigel, a graduate of the Eclectic Medical College in Cincinnati, Ohio, came to Remsen from Des Moines in 1888 but remained only a short time.

Dr. Jenkins, a graduate of a medical school in Omaha, came to Remsen in 1888 but remained only a few months.

Dr. George Repke was located in Remsen from 1890 until 1892.

Other Remsen physicians about whom no data are available were Drs. Hunter, J. J. Schoofs, 1893-1899; and A. O. Eckhardt, 1900-1904.

Dr. C. E. Stewart was born in Indiana in 1869 and began the study of medicine with Dr. J. H. Tolboy of Sioux City. In 1896 he was graduated from the Sioux City College of Medicine and located in Remsen in the same year. He was in Remsen until about 1924. Dr. Stewart, who wrote poems for the local papers, died in Florida about that time.

Dr. Alfred Henry Jastram of Remsen was born in Freeport, Illinois, on December 5, 1871. He attended school in West Point, Nebraska, and attended college at Morningside in Sioux City, Iowa. In 1897 he was graduated from the Sioux City College of Medicine. After a year's internship in St. Joseph Hospital, he was an anatomy demonstrator at his alma mater for one year and professor of anatomy for four years. He received his Ph.B. degree from Morningside in 1900 and his M.A. in 1902. In 1898 Dr. Jastram located in Remsen where he still resides. Although he is semi-retired, he is in good health and is active in community affairs. In 1907 Dr. Jastram was married to Elizabeth Wagner, and they have two boys, Cecil and William. For forty years he has been surgeon for the Illinois Central Railroad, chairman of the local Red Cross for twenty-three years, chairman of the Board of Education for twenty years, and a member of the County Board of Education for twenty years.

Dr. W. H. Heller was born in Carlville, Iowa, July 13, 1873. He attended the University of Iowa and was graduated in 1902 from the College of Medicine and Surgery in Chicago. From 1902 until 1918 he was in general practice in Remsen and in 1918 he moved to Le Mars to be associated with the Le Mars Clinic. In 1906 Dr. Heller was married to Fenetta A. Fry and they had one son, Robert, who is with the Federal Loan Bank in Cincinnati. Dr. Heller died in Minneapolis on June 9, 1921, from a brain tumor. In 1941 Mrs. Heller was married to a lifelong friend, Dr. F. J. Seavers, Doctor of Science with the New York Botanical Gardens of Columbia University, New York, where she now lives.

Dr. William Hornbach was born in 1889, the son of Dr. W. P. Hornbach. He attended St. Benedict's College (Kansas) for two years and was graduated in 1913 from Creighton University School of Medicine. After an internship of eighteen months in St. Francis Hospital, Colorado Springs, he located in Remsen in 1915. He was a member of Phi Beta Pi medical fraternity. In 1913 Dr. Hornbach married Margaret Pierce. In 1918 he left Remsen.

Dr. L. H. Waldmann, who was graduated in 1919 from the College of Medicine and Surgery, Chicago, practiced in Remsen from 1920 until 1922.

Dr. James E. McGovern was born in Highland, Wisconsin, on September 13, 1869. He attended the University of Wisconsin and later was graduated from Rush Medical College in 1902. After one year's internship in St. Joseph Hospital, Chicago, he located in Potosi, Wisconsin, where he remained until 1907. From 1907 until 1923 Dr. McGovern was in practice in his home city of Highland. In 1923 he came to Remsen where he is still in active practice. In 1908 he was married to Evelyn Vogelberg of Potosi, Wisconsin. Dr. and Mrs. McGovern have three children, Kathryn (Mrs. William R. Carlson) of Rockford, Illinois; Edwina, a member of the Women's Army Auxiliary Corps at Fort Des Moines, Iowa; and John, a lieutenant of the field artillery stationed at Fort Sill, Oklahoma.

Dr. Paul H. Beppler of Pullman, Washington, was born in Sioux City on June 19, 1899. After one year at Morningside College, he enlisted in the United States Navy and was in service at the Great Lakes Naval Base Hospital, Charleston, West Virginia, and for several months was on active sea duty. After the Armistice, he was assigned to the Naval Base Hospital at St. Thomas, Virgin Islands, and to the United States Marine Corps in the West Indies until his discharge July 21, 1919. In 1923 Dr. Beppler obtained a Bachelor of Science degree from the University of South Dakota and in 1925 he was graduated from Jefferson Medical College of Philadelphia. After one year's internship in the Atlantic City Hospital, he practiced in Sioux City and Onawa, Iowa. In 1930 he was married to Carolyn Christianson. For four months of that year he did contract mine practice in Somerset, Pennsylvania. From 1930 to 1939 Dr. Beppler was in general practice in Remsen. From 1939 until 1941 he was director of the Student Health Service of the State College of Washington at Pullman. Since 1941 he has been in private practice in Pullman. Dr. and Mrs. Beppler have a son, Robert, and daughter, Judith.

(To be concluded next month)

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

MEDICAL PARASITOLOGY—By James T. Culbertson, assistant professor of bacteriology, College of Physicians and Surgeons, Columbia University. Columbia University Press, New York, 1942. Price, $4.25.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY—By Jerome E. Andes, M.D., director of department of health, University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, $4.00.

STARLING'S PRINCIPLES OF HUMAN PHYSIOLOGY—Edited and revised by C. Lovatt Evans, D.Sc., Jodrell professor of physiology in University College, London; the chapters on the special senses revised by H. Hartridge, M.D., professor of physiology at St. Bartholomew's Medical College. Eighth edition. Lea and Febiger, Philadelphia, 1941. Price, $10.00.

SYNOPSIS OF ALLERGY—By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, $3.00.

ENCEPHALITIS: A CLINICAL STUDY—By Josephine B. Neal, M.D., clinical professor of neurology, College of Physicians and Surgeons, Columbia University. Grune and Stratton, New York, 1942. Price, $6.75.

ADVANCES IN PEDIATRICS—Edited by Adolph G. De Sanctis, M.D., New York Post Graduate Medical School and Hospital, Columbia University. Volume I. Interscience Publishers, Inc., New York, 1942. Price, $4.50.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES—By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, $4.50.

WAR MEDICINE—Edited by Winfield Scott Pugh, M.D., Commander (M.C.) U.S.N., Retired; formerly surgeon, City Hospital, New York. Philosophical Library, Inc., New York, 1942. Price, $7.50.

FUNDAMENTALS OF IMMUNOLOGY—By William C. Boyd, Ph.D., associate professor of biochemistry, Boston University School of Medicine. Interscience Publishers, Inc., New York, 1943. Price, $5.50.

OPHTHALMOLOGY AND OTOLARYNGOLOGY, Military Surgical Manuals II—Prepared and edited by the Subcommittee on Ophthalmology and Otolaryngology of the Committee on Surgery of the Division of Medical Sciences of the National Research Council. W. B. Saunders Company, 1942. Price, $4.00.

THE 1942 YEAR BOOK OR PHYSICAL THERAPY—Edited by Richard Kovacs, M.D., professor and director of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1942. Price, $3.00.

THE 1942 YEAR BOOK OF GENERAL THERAPEUTICS—Edited by Oscar W. Bethea, M.D., professor of clinical medicine, Tulane University School of Medicine. The Year Book Publishers, Chicago, 1942. Price, $3.00.

THE PRINCIPLES AND PRACTICE OF WAR SURGERY—By J. Trueta, M.D., formerly director of surgery, General Hospital of Catalonia, University of Barcelona; assistant surgeon, Wingfield-Morris Orthopaedic Hospital, Oxford; acting surgeon-in-charge, accident service, Radcliffe Infirmary, Oxford. The C. V. Mosby Company, 1943. Price, $6.50.

DISEASES OF THE SKIN—By Oliver S. Ormsby, M.D., Rush professor of dermatology, University of Illinois, and Hamilton Montgomery, M.D., associate professor of dermatology and syphilology, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, Rochester, Minnesota. Sixth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1943. Price, $14.00.

CHEMOTHERAPY OF GONOCOCCIC INFECTIONS—By Russell D. Herrold, M.D., associate professor of surgery (urology) College of Medicine, University of Illinois. The C. V. Mosby Company, St. Louis, 1943. Price, $3.00.

BOOK REVIEWS

ADVANCES IN PEDIATRICS

Edited by Adolph G. De Sanctis, M.D., New York Postgraduate Medical School and Hospital, Columbia University. Volume I. Interscience Publishers, Inc., New York, 1942. Price, $4.50.

This book is Volume I in what presumably will be a yearly series. Its purpose, according to the authors, is to provide a review of recent advances in pediatrics which have not as yet had time to get into textbooks. While current medical literature would undoubtedly yield the same material, nevertheless it is difficult for physicians to find time to keep abreast of advances in all branches of medicine, let alone one or two. For this reason a book of this type would seem to be thoroughly justified.

Outstanding pediatricians in the country have prepared the various chapters, and each subject is discussed in sufficient detail to enable one to get a comprehensive idea of the subject presented. Ten major subjects are discussed: toxoplasmosis, virus diseases, chemotherapy in infants, electro-encephalography, vitamin K in hemorrhage in newborn infants, surgical treatment of persistent ductus arteriosus, the premature infant, tuberculosis, endocrinology, and short abstracts of other advances. The book is approximately three hundred pages in length.

In the reviewer's opinion, any physician interested in pediatrics will find this a most valuable addition to his library.

L. F. H.

CHEMOTHERAPY OF GONOCOCCIC INFECTIONS

By Russell D. Herrold, M.D., associate professor of surgery (urology), College of Medicine, University of Illinois. The C. V. Mosby Company, St. Louis, 1943. Price, $3.00.

This book brings up to date in a clear, concise manner the latest conclusions regarding gonoccocal infections. In discussing the eitology, diagnosis, and treatment, the author includes just enough theory and investigative material to round out the subject. The main emphasis is placed on the practical aspects regarding this condition in men, women, and children. Particular emphasis is placed on the indications and contraindications of the sulfonamide drugs in the various stages of this disease. The author warns the profession against prescribing these drugs without a definite indication. He feels that too often these drugs are given in cases not proved to be of a gonorrheal origin, thus needlessly creating a hypersensitivity in an occasional patient. The last pages consist of brief case histories which illustrate more completely the points the author wished to emphasize.

I feel this book would be a valuable addition to the library of any doctor. G. E. M.

EMERGENCY CARE

By Marie A. Wooders, R.N., principal, school of nursing, Hackensack Hospital; and Donald A. Curtis, M.D., Lieutenant-Colonel, Medical Reserve, Commanding 342nd Medical Regiment, Army of the United States, instructor in military nursing, Hackensack Hospital, Hackensack, New Jersey. F. A. Davis Company, Philadelphia, 1942.

This profusely illustrated book is divided into units. The first is a book in itself, completely covering general emergencies and first aid. One unit is devoted to occupational nursing, which includes industrial, camp, and school nursing, and also lists the necessary equipment for a first aid station. Many of the problems one might encounter in this type of nursing are incorporated in this unit.

National and civil emergencies are ably discussed, with chapters on chemical warfare, decontamination stations, field sanitation, air raid precautions and shelters.

Several chapters are devoted to personnel requirements of army and navy nursing, together with the staffing of army and navy hospitals.

The appendix is an easily accessible table of signs, symptoms, complications, and treatment of sudden illnesses and accidents. At the end of each chapter throughout the book a list of review questions is included.

This is an excellent handbook for graduate nurses in any branch of the profession, particularly for those who do not work under the direct supervision of a full-time physician. M. E. O'D.

A MANUAL OF BANDAGING, SPLINTING AND STRAPPING

By Augustus Thorndike, Jr., M.D., associate in surgery, Harvard Medical School; surgeon to the department of hygiene, Harvard University. Lea and Febiger, Philadelphia, 1941. Price, $1.50.

This pocket size manual of 144 pages, dealing with bandaging, strapping, and splinting, is probably the most profusely illustrated book of its kind ever prepared. The novice can easily follow the steps in the application of various dressings.

The contents of the manual are in six parts: Dry Sterile Dressing for Clean Wounds; Septic Wound Dressing; Sprains, Strains, and Contusions; Dislocations and Emergency Splinting; Transportation of Fractures; and The Use of Plaster of Paris and Similar Bandages in Splinting.

The book should be an invaluable aid to medical students, interns, and nurses; and there are practical points which should interest older practitioners. To a certain extent its contents will be valuable to lay groups who may be faced with emergency problems. D. N. G.

THE 1942 YEAR BOOK OF GENERAL MEDICINE

Edited by George F. Dick, M.D., J. Burns Amberson, Jr., M.D., George R. Minot, M.D., William B. Castle, M.D., William D. Stroud, M.D., and George B. Eusterman, M.D. The Year Book Publishers, Chicago, 1942. Price, $3.00.

This annual volume culls from the 1942 literature the most pertinent and informative articles in the field of internal medicine and presents them in abstract form. The abstracts are short but thorough, and they often are supplemented by editorial comment. When therapeutic procedures are included, these are given in detail.

For the busy physician who wishes to keep abreast of the recent advances and the current conceptions in the field of internal medicine, this handy volume is highly recommended. A. L. J.

ABDOMINAL AND GENITO-URINARY INJURIES

MILITARY SURGICAL MANUALS III

Prepared under the Auspices of the Committee on Surgery of the Division of Medical Sciences of the National Research Council. W. B. Saunders Company, 1942. Price, $3.00.

This two hundred nineteen page manual, replete with illustrations, is interestingly and concisely written. The absence of theoretic considerations and discussions of highly controversial subjects allows space for a great deal of practical information concerning diagnosis and treatment.

General consideration of abdominal wounds, together with the features more frequently existing in battle casualties, receives initial attention. Wounds of each intra-abdominal organ with the individual characteristics of each are then taken up one after another.

Many illustrations aid in the elucidation of the technical procedures described. Where choice of treatment exists, the indications for each are enumerated.

Pre- and postoperative treatment receive their due prominence. Likewise, postoperative and wound complications receive emphasis to aid the surgeon in appreciating the likelihood and incidence of their occurrence.

Much valuable information has been resolved into a few pages by men well versed in their specialized fields for the benefit of those caring for abdominal and genito-urinary wounds. Civil as well as military doctors will find this manual easy reading and much worthwhile. J. B. P.

The JOURNAL of the Iowa State Medical Society

VOL. XXXIII DES MOINES, IOWA, JULY, 1943 NO. 7

PUBLIC OPINION AND THE PROFESSIONS*

VIRGIL M. HANCHER, President
State University of Iowa, Iowa City

At the outset I wish to express appreciation on two counts: first, for the opportunity of meeting with you, and second, for the close relations which exist between the University, and more particularly the College of Medicine, and this Society. The faculty of the College of Medicine and many others of us who are connected with the University were much pleased when your Society saw fit to devote a recent issue of the JOURNAL to the work of the College. I can assure you that there exists a sincere desire to maintain the College at the highest level of excellence in order that it may serve you, and this state which supports it and makes it possible, and the great profession to which you belong.

Many of the men who have addressed you at your meetings have been specialists. In an age of specialization, the university president is an anachronism. If he is a specialist when he assumes office, he promptly ceases to be one. He becomes a jack-of-all-trades. He is expected to have the attributes of a president of a corporation one day and those of a father confessor the next. He is expected to be a scholar, a business man, an orator, and an administrator—an encyclopedia of the past, an oracle of the present, and a prophet of the future. Clearly this is an expectation impossible of fulfillment. I shall not endeavor to live up to it. Rather, I come to you as a fellow citizen, anxious to discuss with you certain problems of mutual concern; for I am certain that you in medicine and we in education shall not escape the unrest and difficulties which will exist for the duration and which will become acute when the fighting ceases.

No doubt many of you have heard the story of the country doctor who was called, at great inconvenience to himself, to go on horseback for several miles to deliver a baby in a farm home. The way was long, the difficulties were great, the delay was prodigious, and finally almost by a miracle, the delivery was safely completed. For this the doctor never received a fee. Twenty years later the baby, grown to manhood, turned out to be a rascal and was sent to the penitentiary. The good doctor, on hearing the news and recalling the trip he had made and the time and trouble he had expended, wondered if it had all been worth while. You and I are in professions where we must gamble—you against disease and death, we against inertia and mediocrity. And no doubt each of us wonders at times if the game is worth the effort. To what end do we put forth our skill and strength? But the worthy life that is rescued from the almost certain peril of death or the uncouth boy who develops the gift of creative and original work in science or in letters, in the professions or in the arts, is the reward that makes the game worth the effort.

It is not my thought, however, that we should spend our time this evening justifying our callings to ourselves or, in the manner of the Pharisees, thanking God that we are not as other men are. We can justify our ways to ourselves, but there remains the more serious question: Can we justify ourselves and all our doings to our constituents? In the main, I think we should be able to, but I am not so certain that we always do. It is not enough to be right. It is important also to have others believe that we are right.

The elder J. P. Morgan, who died on the eve of the first World War, is reported to have said, "The time will come when everyone in this country will do business with glass pockets." He meant that the time would come when business men would be compelled to abandon the secrecy surrounding their transactions, when they would be forced to transact business in the full glare of publicity, when they would be bound to consider

*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.

the force of public opinion upon every move they made. If you doubt that that time has come, I urge you to interview the executive officers of corporations subject to the Federal Securities Act, the Securities and Exchange Act, the Public Utilities Holding Company Act, and the Wagner Act, not to mention the statutes and regulations adopted since the outbreak of war. We have now reached the point where public opinion is a powerful taskmaster over business, the professions, and the quasi-public callings.

You will recall the circumstances under which public opinion was stirred up to make possible the enactment of the Federal Securities Act and the Securities and Exchange Act. We had passed through a stock market boom and crash and were in the midst of a depression. Hundreds of thousands of people had lost money in securities. We were reluctant to admit our own folly. It was human to rationalize our mistakes. We were loath to suspect our own judgment. It was far easier to say that we were deceived and misled. This was the mood and temper of the country in the summer of 1932. The result was a popular outcry against investment bankers. The issue became a political one, and it was taken up by Congress. A senatorial investigation was ordered, and investment bankers were put on the rack. A considerable number of them had engaged in practices which could not be defended, and they deserved all that was meted out to them. But others were subjected to vicious attacks and to misrepresentation. One great firm was held up to public scorn and contempt because its members had taken income tax losses which the law entitled them to take. The only moral obligation involved in the payment of taxes is the obligation to pay those taxes which the letter and the spirit of the law impose. When the law provides that losses may be deducted, there is no moral obligation to refrain from taking them. Nevertheless, United States Senators, who had themselves enacted the tax laws, pilloried men who had complied both with the letter and the spirit of the laws. I have dwelt on this illustration at some length, because I wish to emphasize that it is not sufficient for you in your calling or me in mine to know that our conduct is right. It is important also for the public to know that it is right.

If freedom of the press is ever lost in this country, it will not be lost until the press has fallen into such disrepute that it can no longer rally the people to its side. The vast majority of newspaper publishers are honest men trying to do an accurate and honest job. But the whole newspaper world can be brought into disrepute if any considerable proportion of the newspaper publishers, considerable either in number or in power, fail to live up to those standards of honest and careful reporting and fair comment which the public has a right to demand. Here again the appearance of evil can be as damaging as evil itself. Whenever there arises a general opinion that the newspapers of the country, or any considerable number of them, are not honest and careful in their reporting and fair in their comment, freedom of the press will be in danger and it may be lost. In such a time both the innocent and the guilty may invoke the protection of the Constitution and point out the evils of a controlled press, but to no effect. The ears of an outraged public are deaf. It is then too late to be heard. Constitutional provisions may provide safeguards for a limited length of time, they are protection against transient gusts of passion, but in the long run constitutional provisions will mean what the people want them to mean or they will be changed.

The past ten years have demonstrated that ultimately the courts are moved by the spirit of the times. You may remember that Peter Finley Dunne's creation, Mr. Dooley, once said that the Supreme Court is not elected, but its members follow the election returns. Our constitutional guarantees, like all our rights and privileges, rest in the conservatism and restraint of the people and not in a written document. In the long run, therefore, what the people think about the freedom of the press is more important than what the Constitution says about it. Twenty years ago most citizens would have regarded the tradition against a third term as inviolable as any clause of the Federal Constitution, yet we saw with what great ease and with what little regret that tradition was broken in 1940. The question of the third term scarcely rose to the dignity of a major issue during the presidential campaign. So I repeat that our constitutional guarantees, like all our rights and privileges, rest more in the conservatism and restraint of the people than in any written document.

For sixteen years of my life I was an active member of the legal profession, a profession which has suffered its full share, or perhaps a little bit more than its full share, of public criticism. From my experience during those sixteen years, I would guess that more than 99 per cent of the members of that profession are competent, industrious, and honest men. Almost without exception, the oral promise of a member of the profession can be relied on with safety and security. Nevertheless, the profession has always been subject to misunderstanding and criticism of a peculiarly violent kind. Perhaps this criticism reached its climax in the middle years of the last decade when

New Deal legislation was under attack in the courts. You will recall the denunciation hurled at the profession and at the courts, and particularly at the "nine old men" who then sat on the United States Supreme Court. So bitter was the feeling that the President sought a law to enable him to appoint to the Court judges who shared his political philosophy in order that he might have a majority favorable to his legislative program. The President's attempt failed. The bill was defeated. But time has given the President what Congress would not give. The President has appointed seven of the nine justices of the present Supreme Court and great numbers of circuit and district judges. In nearly every case, he has appointed men who shared his political opinions and who would construe the Constitution in accordance with his views. It is rather generally conceded that the present Supreme Court is so much in sympathy with the President's point of view that it would be disposed to uphold the constitutionality of any law which the President regarded as of basic or fundamental importance. In this instance, a great profession has been publicly chastised and the courts have been brought into line with the prevailing political opinion. And it was a hostile and critical public that made it possible to bring the courts to this position.

It is not from the viewpoint of a hostile critic, therefore, but from the viewpoint of a professional man and a friend that I venture the suggestion that your profession has been declining somewhat in the confidence and regard of the public, and that it is vitally important for you to restore that confidence and regard at the earliest possible moment. It may be difficult for doctors to recognize and admit such a loss in confidence and regard. The dependence of the individual patient is so great and his confidence in his physician is so complete that doctors often are not called upon to become skilled in the nuances of public relations. Being conscious of their own skill and probity and being affected by the dependence of the patient, they may remain insensitive to situations which bring criticism on the profession as a whole. And no doubt criticism of the profession seems doubly unfair because of the very great advances which have been made in the medical sciences during the past one hundred years and the contributions which those advances have made to the health and welfare of the people.

Nevertheless, I believe that I am correct in my observation that your profession has suffered a decline in the confidence and regard of the public. The causes no doubt are many and complex. I shall not attempt to enumerate or to analyze them, but I shall mention two. This decline results from the belief that the profession is overspecialized and from the belief that the cost of specialized service is too high. It will be an unwelcome day when the public suspects that men are being attracted to the medical profession not for the practice of an art, but for the making of money. The respect with which the physician is held does not spring from the size of his fees but from his qualities as a man and as a practitioner.

These present beliefs may not be well founded, but it is important to you that they are held by large numbers of people. In the city in which I formerly lived, it was not possible for my children and me to be treated by the same doctor even though we all suffered from a common cold. The children were attended by a pediatrist. I was attended by a physician for adults. The reason was clear. Pediatrics is a specialty. Pediatrists, out of deference to their colleagues, did not treat adults. The colleagues conversely did not trespass on the field of the pediatrist. The care in each case was excellent, but the costs were high. This may be an extreme situation, but it is not uncommon. Further, each complication seemed to call for a consulting specialist. The results were good, but the costs were great. Accompanying this was the obvious fact that doctors had incomes which on the average appeared to exceed those of other business and professional classes in the community. Whether or not this appearance was correct is rather beside the point. The point is that there was a prevailing belief that it was true. The opinion, even though false, was just as powerful as if it were true. In many respects this feeling was neither logical nor reasonable. No one was compelled to call a specialist. There were some general practitioners available. Persons who consulted specialists did so voluntarily, and theoretically had little right to complain. Nevertheless, they did complain that specialization was excessive and that the cost of adequate medical care was too high.

This rather simple and homely illustration needs no further elaboration. You can supply other instances and further details as readily as I can. What I have said illustrates a point of view which I believe is spreading and not diminishing. It calls for interpretation and justification to the general public, or for remedy and correction if the medical profession is not to suffer unduly on its account. The anti-trust suit in the District of Columbia and criticism of, and agitations against, your various associations are further evidence, if evidence is needed, that the relations of your profession to the public should be a matter of concern to all of you.

As I said a few moments ago, I speak as no hostile critic, but as one vitally interested in you and in your problem, for I feel that you are facing a critical period. The demands of the war throw a heavy burden on those of you who remain in civilian life. As these burdens become heavier and it becomes more difficult to provide medical attention, tempers may become short and there may be a lack of sympathy and understanding of your problems. There is apt to be unjustifiable and unfair criticism of the profession. And if any members of your profession seize, or appear to seize, this opportunity for their own profit, they will bring down wrath upon themselves and upon the whole profession.

There is an increasing public interest in preventive medicine, in health insurance, and in so-called "socialized" medicine. Thousands of doctors have been uprooted from their practices and have been drawn into service. When they return their practices will be gone. They will have to start anew. Many will have wives and children requiring immediate and continuous support. They will not be free to take the risks they once took. A small certainty may look better than a gamble for greater stakes. They will be ripe material for a program of socialized medicine. If to this there is added a general public unrest over the prevailing system of medical care, you will have the groundwork laid for socialized medicine, just as the events of 1929 to 1932 laid the groundwork for the Securities Act and for regulation of the exchanges. If you regard this as an undesirable development, and I am certain that many of you do, you have no alternative but to keep your house in order and to convince your patients and the public that your profession is dominated by a desire to serve and is endowed with a capacity to serve the needs of the times.

My only concern in this matter is that your great profession shall not only remain great intrinsically, but that it may remain high in public esteem. Your tradition comes from Hippocrates. The earliest university of our Western culture, the father of all universities, was the University of Salerno, established almost 1,000 years ago for the teaching of medicine. At first the progress of your profession was painfully slow. The development in the past hundred years constitutes one of the great episodes of our modern civilization. And today you seem to stand on the threshold of your greatest achievements.

In a world given over to death and destruction, it is your task to save and to reconstruct. I wish you skill and strength in the performance of that task.

INTRA-OCULAR NEURITIS*

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It is appalling to find the numerous etiologic factors of acute intra-ocular neuritis. Due to the various causes, it is no doubt true, as stated by Duke-Elder, that "in the majority of cases improvement occurs while the patient is undergoing the usual investigation to establish the diagnosis." An oculist sees many patients who are concerned over their condition, but few are more alarmed than those who have suddenly lost their vision. It is difficult for the physician to search for the cause with the patients so anxious and hard to control.

Anatomically, the optic chiasm rests between the two optic thalami. The optic nerves are not nerves in the true sense of the word, but are tracts of the central nervous system, outgrowths of the cerebrum. This makes them occupy a distinctive position in the anatomy of the human body. Dura, pia and arachnoid cover them. The spaces between are in open communication with the corresponding spaces in the brain, and therefore diseases of the optic nerves are essentially diseases of the central nervous system. It is important that, protected from external influence, involvement of the optic nerves usually indicates some disease which originated in the general system or the central nervous system.

Papilledema is a passive edema due to raised intracranial pressure without disturbance of function. Optic neuritis is a swelling of the disk associated with inflammation and loss of vision. The two conditions have a different etiology, a different pathology, different symptoms and sequelae, but nevertheless in the early stages a clinical differentiation between the two may be difficult. It is customary to divide optic neuritis into two groups: Intra-ocular neuritis and retrobulbar neuritis. The general pathology is the same and many inflammations of the retina spread to the nerve head, while conversely nerve head inflammations spread to the retina.

The inflammatory changes occur primarily around the blood vessels and are ushered in by edema of all the tissues and a dense infiltration with leukocytes, lymphocytes, and plasma cells. Such changes, affecting the distal end of the nerves, are evident clinically as papillitis. Occasionally the whole thickness of the nerve is implicated, but the lesion usually is insular. This is followed by degenerative changes.

Clinically, intra-ocular neuritis manifests itself by a sudden loss of vision which precedes any

*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.

objective appearance of a pathologic nature. It is generally associated with pain behind the eye; contracture of the pupil under bright light (this is not maintained and the pupil slowly dilates, although direct and consensual reactions are present); and lowering of the dark adaptation.

The loss of vision is usually central and the blindness may be complete. The symptoms often appear suddenly. In the majority of cases they are transient, lasting one to four weeks, and the recovery of sight may be complete. In every case in which the destruction of nerve fibers has been sufficiently severe, some degree of degeneration will follow. In mild cases there is a pallor of the disk on the temporal side, but in severe cases there is a complete atrophy with permanent visual defects.

When the inflammation affects the nerve head, the picture of papillitis is produced. The disk becomes hyperemic to a degree that its differentiation from the rest of the retina becomes difficult, its edges become blurred and indistinct, the veins become dilated, and hemorrhages and exudates appear in the tissue of the papilla. The haziness is frequently accentuated by the development of opacities in the posterior vitreous body. Ordinarily there is a swelling of the nerve head of less than two diopters.

Symptoms appear suddenly with the loss of sight preceding the ophthalmoscopic change. The loss of sight and the recovery are frequently synchronous with visible changes of the papilla.

For many years the sinuses, due to their proximity to the optic nerve, offered the best solution to the etiology of sudden loss of vision. Odini in 1908 published his study on the "Anatomical Relationship Between the Accessory Sinuses and the Optic Nerve." Given this impetus, there was a vogue for many years that the sphenoidal sinus must be opened for all optic nerve disturbances. With the advent of the work of Billings and Rosenow, followed by the marked advancement in radiology, it was learned that such an insignificant thing as a tooth could cause this condition. For a time focal sepsis was thought to be the predominating cause. At present, due to the work of Benedict and Lilly in 1934, who found that visual disturbances were the "primary episodes" in 15 per cent of the cases of disseminated sclerosis and the second and third episodes in 40 per cent, the pendulum has swung to this disease as a cause, especially of retrobulbar optic neuritis.

Although a tentative diagnosis of a focal infection is made and the foci eradicated, I believe these cases should be observed for several years. The average length of time for the development of generalized central nervous symptoms is six or seven years, according to Aldie, because the first symptom may be an optic neuritis. There are many other causes, such as syphilis, acute febrile diseases, complications of intra-ocular disease, meningitis, encephalitis, and tuberculosis. Hayden and Cushman recently reported a case of optic neuritis on an allergic basis. Keschner and Rosen reported a case produced by coal tar hair dye. The causes are far too numerable to discuss.

As a rule the prognosis is good. Papillitis is generally worse than retrobulbar neuritis because the danger of strangulation is greater. Unilateral cases have a much better prognosis than those which are bilateral. In cases in which the symptoms are slowly progressive the visual defects are more marked.

In the severe cases, general measures should be carried out in addition to directing the treatment against the cause. Bed rest is always advisable and steps should be taken to reduce the local edema by administration of salicylates, a free opening of the bowels, and the induction of sweating by hot baths. Protein shock by the intravenous injection of typhoid vaccine is advocated.

CASE REPORT I

History: R. D., a boy twelve years of age, was referred to me on May 4, 1942. He complained of a sudden loss of vision in the right eye which was of one week's duration. He had suffered occasional headaches in the right frontal region during the preceding six months, which had been relieved immediately following rest. There was nothing of any importance concerning his past or family history.

Physical Examination: General and neurologic examinations were negative except for hypertrophic tonsils. There was no nasal obstruction. The patient's eyes showed no external abnormalities. The extrinsic muscles of the eyes were normal. Vision of the right eye was 20/800, and of the left eye, 20/20; the tension was normal. The right pupil was slightly larger than the left, but both reacted to light and accommodation. The right eye, however, would not remain contracted, but slowly dilated. There was a swelling of the nerve head of about two diopters. There were many small hemorrhagic spots in the area of the macula. Two days later the hemorrhagic spots developed around the disk. The veins were engorged. There were indentations in the region of the arteriovenous crossings. At the end of one month pearly, star-shaped figures developed in the region of the macular field. There was a peripheral contraction of the right field, and the left field was normal. The white blood count

showed a slight rise to 10,400. Serologic examination of the blood for syphilis was negative. X-ray plates of the skull revealed no pathology. The urine was normal.

Treatment: The administration of sulfadiazine was instituted May 4, 1942. On May 8 the tonsils and adenoids were removed. The patient was given vitamin therapy and a nourishing diet. Gradually the pathology of the fundus subsided. The last evidence to disappear was the pearly spots in the region of the macula. Two months later the vision of the right eye was 20/22, and the left eye was 20/20. There were slight, pearly spots in the region of the macula, very little haziness in the area of the optic papilla, and the blood vessels returned to normal. On July 30, almost three months from the onset, the vision of the right eye was 20/20 with some distortion and the vision of the left eye remained 20/20. On April 10, 1943, eleven months following the onset, vision of the right eye was 20/20 with distortion and the left eye was 20/20. There were no visible changes in the fundus except that no foveolar reflex was seen in the right eye. There was still a peripheral contracture of the visual field of the right eye.

CASE REPORT II

History: N. M. C., a girl ten years of age, was referred to me on June 11, 1942. She complained of a sudden loss of vision in the left eye five days prior to this time. One week before the onset of diminution in vision she had had a mild head cold. She had no other symptoms such as headache, vomiting, or double vision. Her personal, past and family history were unimportant.

Physical Examination: General and neurologic examinations were negative except for hypertrophic tonsils and adenoids which caused a moderate degree of nasal obstruction. The patient's eyes showed no external abnormalities; the ocular movements were normal; the tension was normal; the pupils were equal; both direct and consensual pupillary reactions were present. The left pupil would not remain contracted, but slowly dilated. The vision of the right eye was 20/20; the left eye, light perception. Ophthalmoscopic examination of the right eye showed that the media was clear and the fundus normal, of the left there was an elevation of two diopters. The vessels were altered, the ratio being two to five; the arteries were very thin; and the veins distended and tortuous. The disk was swollen and the vessels appeared interrupted by the swelling. There were hemorrhagic spots near the disk on the temporal side. The x-ray examination of the skull was negative for evidence of sinus disease. The size and shape of the sella turcica was normal. Serologic examination of the blood for syphilis was negative; the urine was normal; the tuberculin reaction was positive; and x-ray plates of the chest showed calcified areas at the hilus.

Treatment: Sulfadiazine therapy was given at once, and it was decided to remove the tonsils and adenoids. A tonsillectomy was performed on June 13, and the patient's vision immediately began to improve. The recovery of sight was synchronous with the visible changes of the fundus. Vision returned slowly in the left eye and on August 14, which was two months later, it was 20/20. The changes of the fundus completely disappeared.

COMMENT

It was a coincidence that both patients whose conditions were described in this manuscript came for treatment during the same month. Both patients presented indubitable signs of acute intraocular neuritis, limited to one eye. They were children ten and twelve years of age and their homes were in the same rural neighborhood. Both apparently were healthy, complaining of nothing but sudden loss of vision in one eye. The problem which interested me was the determination of the underlying cause. Naturally the results of the sulfadiazine therapy and the removal of the tonsils and adenoids would lead one to believe that the etiologic factors in these two cases were septic foci in the tonsils. Nevertheless, with the recent work showing the relationship of optic neuritis to disseminated sclerosis, I believe these children should be observed for several years for any neurologic symptoms.

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PUBLIC HEALTH TODAY*

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The most timely question facing the American citizen today is, what can I do to help win the war? No sacrifice or extra effort seems too great considering the important issues at stake and what they mean to the future progress of civilization. Public health workers are in an exceptionally favorable position to aid the war effort because of their peacetime training and experience. As I look into the earnest, intelligent faces of so many serious-minded individuals and consider how you have assembled for the purpose of gleaning new facts in order to be able to concentrate your energies and talents where they might accomplish the most constructive good, I feel far removed from the destructive consequences of wartime. I am filled with a new sense of pride in the achievements of public health during recent years, and knowing that it is a dynamic science wherein new developments are unfolding almost daily, I believe that the days ahead will hold for all of us increased responsibility and greatness of opportunity.

I cannot share fully the thought advanced by a friend recently that war means a retarding of all constructive effort. Public health activities have been accelerated to such a degree to strengthen the nation's defenses that efforts on the part of those engaged in this profession have been stimulated, not retarded; and it is expected that when the conflict is over, the final results of this stepped-up activity will be recorded in new and improved measures to protect against disease and death. Just as other great conflicts have spurred men to greater achievement in invention and science, even so the present one will prove no exception and it may be that even greater accomplishments will be made because of the vast progress of recent years —all of which will mean for the public health worker new tools for the curbing of needless deaths and for the promotion of maximum physical fitness.

Because of the tremendous problems presented by the war, public health undoubtedly faces one of the greatest challenges at this time since its inception. The efficiency of our military forces, our civilian population producing the equipment, and the state of our national morale are dependent upon freedom from preventable diseases and the maintenance of a good state of health generally. Since we know from past experience that war activities increase the incidence of communicable diseases in almost all areas where troops are mobilized or civilian population is concentrated, we must put to work every precautionary measure which modern science has proved effective in checking and controlling these diseases and leave nothing undone which will reduce preventable illnesses and disabilities. Disease is reported to have killed more people than bombs and bullets; the number of deaths from tuberculosis alone in the United States during the last war exceeded the total number of our men dying in the service. Add to that the staggering world-wide mortality of twenty-two million people from the 1918 influenza pandemic and the three million lives claimed by typhus fever in Russia and Serbia from 1918 to 1921, and it is easy to see why public health work assumes such importance in wartime.

We can be thankful that severe epidemics of many of the diseases which characterized other war periods are today only minimum hazards because of the continuous application of public health measures for their control. In a review[1] of the mortality record for 1942, the death rate in the United States was very low in spite of the war. It was revealed that the rate among the industrial policy holders of one large company was 7.39 per 1,000 in 1942 as against 7.44 in 1941. As a result of the amazing progress in chemotherapy and general preventive measures, the effect of war deaths was more than counterbalanced by a drop in deaths from infections. The decline in pneumonia from 50.6 per 100,000 in 1938 to 29.4 in 1942 can be ascribed largely to this progress. Although it was feared that there might be an influenza epidemic last year, deaths from this cause were only 4.2 per 100,000—44 per cent below 1938. The tuberculosis rate was reduced, contrary to expectations during wartime, and demonstrated the favorable situation of this country in comparison with Europe and Great Britain. Venereal disease did not show the full wartime effect, although the situation was pointed out to be serious. The 1942 death rate from this cause was record-low as a result of control measures put into effect before the war.

Venereal disease has always flourished in wartime, however, and the present period is no exception. Because it is such a waster of manpower and deters the war effort, it is imperative that cases be detected early and treated promptly. Having already provided clinic and treatment facilities through local health departments, our next objective must be to secure a decrease in contacts between healthy individuals and those infected. This means a vigorous attack against commercialized prostitution, enlisting all community forces. To aid in the continuous and intelligent search for infectious venereal disease cases in Mississippi,

*Presented before the Seventeenth Annual Meeting, Iowa Public Health Association, Des Moines, April 27 and 28, 1943.

and to insure proper follow-up work in seeing that some twenty thousand registrants deferred because of syphilis are put through the full schedule of treatment, the State Board of Health last July began the training of special lay investigators for assignment to the more critical areas. This class of worker is proving to be extremely valuable in the investigation field in view of the shortage of nurses and medical personnel and is helping to solve the problem of locating contacts to military personnel, seeing that they are placed under treatment, and following up on cases where treatment has lapsed.

The War Public Works Agency, under the Lanham Act, is making possible the operation of several treatment centers in Mississippi and other states, designed to cure early syphilis and gonorrhea in infected women. In addition to medical treatment to cure and render these cases noninfectious, the centers will attempt to provide some form of vocational guidance where the individuals seem amenable to such assistance. Without doubt, war has provoked much delinquency and social dislocation and it is hoped that this program will help many unfortunate individuals, whose backgrounds scarcely gave them a chance, to recover from disease and to be able to have some of the satisfactions which come from honest, clean living. By helping them find some place of useful endeavor in community life, the nation will be spared much of the heavier costs of delinquency which would result later on.

We must learn to impress upon people that they have a personal responsibility for their own health and well-being and strive to eliminate some of the barriers which hamper the more widespread application of modern public health knowledge. Tomorrow's world will be one in which all nations and all peoples will be thrown closer together than ever before, and there must be a new kind of cooperative life operating on a global scale, wherein everyone will feel that he is his brother's keeper, or else hazards will again develop to undermine the security and progress of the whole human society.

"The part that science and advancing knowledge will play must not be overlooked," points out philanthropist Raymond B. Fosdick[2] of the Rockefeller Foundation. "For although wars and economic rivalries may for longer or shorter periods isolate nations and split them up into separate units, the process is never complete because the intellectual life of the world, as far as science and learning are concerned, is definitely internationalized, and whether we wish it or not an indelible pattern of unity has been woven into the society of mankind. There is not an area of activity in which this cannot be illustrated. An American soldier wounded on a battlefield in the Far East owes his life to the Japanese scientist, Kitasato, who isolated the bacillus of tetanus. A Russian soldier saved by a blood transfusion is indebted to Landsteiner, an Austrian. A German soldier is shielded from typhoid fever with the help of a Russian, Metchnikoff. A Dutch marine in the East Indies is protected from malaria because of the experiments of an Italian, Grassi; while a British aviator in North Africa escapes death from surgical infection because a Frenchman, Pasteur, and a German, Koch, elaborated a new technique.

"In peace as in war we are all of us the beneficiaries of contributions to knowledge made by every nation in the world. Our children are guarded from diphtheria by what a Japanese and a German did; they are protected from smallpox by an Englishman's work; they are saved from rabies because of a Frenchman; they are cured of pellagra through the researches of an Austrian. From birth to death they are surrounded by an invisible host — the spirits of men who never thought in terms of flags or boundary lines and who never served a lesser loyalty than the welfare of mankind. The best that every individual or group has produced anywhere in the world has always been available to serve the race of men, regardless of nation or color."

As we look about us and see the vast amounts of illnesses which are preventable and the great number of physical defects which could be corrected, we stop and ask "why" these conditions should prevail in a world in which medical resources and knowledge are so abundant. Surely the means will be found eventually to translate these resources into a higher state of health for all these individuals who will be handicapped in their contributions to society's progress until such a state is attained. Without doubt, public health stands at the threshold of new and unlimited opportunities. We have overcome many obstacles in the distances covered in recent years; we shall therefore face the future determined that we shall let no obstacle deter us from achieving the potential good which is within our reach. Practically all genuinely great accomplishments have come when the obstacles seemed biggest. So it is today as we look out upon a war-torn world in which destruction rather than construction seems to prevail. However, if we stand firm our ground and not let obstruction overtake us, it is my belief that when the day of victory arrives public health will figure largely in the gains which will have been made and these will perhaps serve in some measure to offset the tragic losses of the battlefield. I have every confidence that public health workers

will accept extra duty and responsibility willingly, realizing that their sacrifices and good works will speed the time when peace shall reign again and the fruits of the newer knowledge of preventive medicine and hygiene may be more easily harvested.

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THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

BARBITURATE POISONING

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Barbiturate addiction has long been known to occur frequently and is increasing in the United States. Its dangers have been recognized by the medical profession as well as by the federal and many state governments. The resulting restrictions on the sale of barbiturates and their derivatives may later cause improvement, but at the present time they do not seem to have been especially effective. In the final analysis, effective control is largely in the hands of physicians who prescribe them. They must be fully aware of the dangers and be just as strict in prescribing the drugs as they are in the instance of opium derivatives. Besides the dangers of addiction, which include accidental overdosage, these drugs seem to influence many of the addicts to commit suicide. Certainly the fact that there were four cases of poisoning by the barbiturates in our 913 necropsies, which led all other poisons except alcohol as a cause of death, indicates the seriousness of their promiscuous use.

CASE REPORT I

History: The patient, a man forty years of age, was noted staggering on the streets of a nearby town. It was noticed that his face was cyanotic, his eyes were bloodshot, his breathing was stertorous, and at times he made purposeless movements with his hands and made irrelevant remarks. Because he was thought to be intoxicated with alcohol, he was put in the town jail where he appeared sober the next morning. It was learned that the patient's home was in a neighboring city and he was advised to return home, which he readily agreed to do. When offered a ride to make connection with a train for his home town, he stated that he preferred to hitch-hike. That afternoon, a highway policeman saw him staggering down the middle of a highway and returned him to the custody of the town authorities since he was afraid he would be struck by an automobile. That night he became exceedingly boisterous for a time and inmates of the county home, where he was placed, stated that about midnight he became quiet but that they could still hear his stertorous breathing. The next morning he was found dead.

Necropsy Abstract: At necropsy the cyanosis of the entire body, but especially of the face and neck, was striking. The eyes were bloodshot and seemed to protrude moderately. On the routine examination the right side of the heart was dilated and all the organs were intensely congested. There was some vomitus in the trachea and bronchi, and the lungs were edematous. The brain was intensely congested but no areas of softening were found. Indeed, the diagnosis was in doubt until the question of his peculiar gait was brought up. Upon removing his hose, an envelope containing tablets later identified as barbiturates was found in the toe of the right stocking. Subsidiary findings were healed, mitral endocarditis, left fibrous pleurisy, and chronic cholecystitis and cholelithiasis.

CASE REPORT II

Chief Complaint: The patient, a white woman thirty years of age, was admitted in an unconscious condition to the Finley Hospital October 11, 1942.

Family History: The patient's father, mother, and husband were alive and well. There was a history of insanity on the paternal side of the family.

Past History: The patient had never been pregnant and stated that she had always had dysmenorrhea. One ovary, an oviduct, and a Bartholin's cyst had been removed several years prior to this time in another hospital. Her upper teeth had been extracted in June, 1942, and since that time she had had amenorrhea. The patient had been well known to the medical profession as a heavy drinker of alcoholic beverages and as a barbiturate addict. She had threatened suicide several times and also had made life miserable for her husband, whom she had threatened to kill on repeated occasions.

Present Illness: The patient had been drinking consistently and heavily prior to admission to the hospital. Her husband stated that she seemed drunk when she retired at 7:30 the night before and that he was awakened at 2:00 a. m. because

of her noisy, difficult breathing. Since he was unable to arouse her, he called a doctor. When the patient was first seen, she was comatose, intensely cyanotic, and had stertorous breathing; the pulse was very rapid and weak. She was known to take barbiturates freely and often, and since there were large quantities of various barbiturate derivatives in her room, it was believed that she had taken an overdose.

Physical Examination: The head, ears, and nose were negative. The conjunctivae were injected; the pupils were equal but reacted slowly to light. The corneal reflex was sluggish. The lips were cyanotic; the tongue was dry; and the pharynx was negative. There was no rigidity of the neck but the thyroid gland seemed slightly enlarged. The chest was negative but a few râles could be heard throughout the lungs. The heart was negative, but the pulse was rapid and weak (180 per minute). The blood pressure was 120/76. The abdomen was negative except for the operative scar. The vaginal examination was not satisfactory but the uterus seemed somewhat enlarged. The extremities were cyanotic and flaccid. All reflexes were sluggish. The temperature was 103 degrees, the pulse 180 and respirations 36 per minute. The white blood count was 31,200 per cubic millimeter, the red count was 6,500,000 with hemoglobin 102 per cent Sahli.

Provisional Clinical Diagnosis: A question of barbiturate overdose or alcoholism.

Course in the Hospital: Urinalysis revealed 0.10 per cent by weight of alcohol and faint traces of barbiturates. In spite of the treatment instituted, the patient died fifteen hours after admission with a temperature of 107.6 degrees.

Final Clinical Diagnosis: Barbiturate poisoning with acute alcoholism.

Necropsy Abstract: At necropsy there was a small amount of clear fluid in the abdomen and on each side of the chest. The lungs showed acute congestion and moderate edema. All the abdominal viscera were acutely congested. A most striking feature was a greatly enlarged thymus which weighed 175 grams. The sections showed only marked hyperplasia. The thyroid gland showed small adenomas.

Primary Anatomic Diagnosis: (1) Barbiturate poisoning; acute alcoholism. (2) Marked hyperplasia of the thymus gland; ascites; acute congestion and edema of the lungs; acute congestion of all the viscera.

Subsidiary Anatomic Diagnosis: Operative scar (left salpingectomy and oophorectomy); adhesions between surgical scar and intestines; calcified bronchial lymph node.

COMMENT

Each case is a tragic example of barbiturate addiction in which the individual, apparently dependent upon the drug, took an overdose which resulted in death. Each illustrates the personality change in the individual. The first patient resembled a common drunkard and the second was a shrew with homicidal tendencies when under the influence of the drug, the effects of which were increased by the addiction to alcohol. Probably each took the overdose of barbiturates accidentally rather than with suicidal intentions.

GENERAL DISCUSSION

The increase in the use of barbiturate derivatives is indicated by the fact that in 1936 Hambourger[1 and 2] estimated that 1,620,000,000 grains were manufactured in the United States and that 1,219,000,000 grains were sold. He estimated that this represented 800,000,000 doses a year, which is more than 2,200,000 doses a day. McNally[3] stated that 2,283,302 grains were sold in 1940—an increase of over 100 per cent since 1936. While admitting that the barbiturate derivatives are among the best sedatives, obviously the requirements of the American public do not demand such huge amounts.

McNally has shown that in Cook County Hospital, Chicago, deaths from barbiturate poisoning increased from 4 in 1931 to 54 in 1940, whereas the deaths from alcohol fell from 16 to 5 per year in the same period. He also stated that barbiturate poisoning exceeded that of any other poison in the hospital during 1938 and 1939, when a total of 184 cases were treated. Hambourger estimated that for the four year period from 1932 to 1936 the national incidence of suicides by barbiturates represented 4.2 per cent of all poisonings, except gas, in large cities, ranging from 2 to 16 per cent and accounting for 0.66 per cent of all methods used for suicide. These statistics indicate the seriousness of the problem of the promiscuous use of these drugs. That this problem was recognized by the medical profession is evidenced by the resolution presented to the American Medical Association in requesting a study of the "Evils of the Promiscuous Use of Barbituric Acid and Derivative Drugs." In the resolution they were described as follows: "The evils of these drugs include habit formation, toxic cumulative action, their substitution for alcoholic beverages for drunken episodes, their use for successful as well

as unsuccessful suicidal attempts, their improper use being recognized as a causative factor in many motor accidents, and their improper use being a recognized etiologic factor in some criminal assaults." The investigation was conducted by Hambourger and his conclusions were that "the evidence clearly indicates that these drugs are responsible for many suicides, successful and attempted, as well as for many so-called 'accidental' intoxications. As each new barbituric acid derivative becomes publicized, it soon becomes involved in cases of poisoning. Barbiturate addiction is fairly common. It makes up about one-tenth of all drug addiction cases (excluding chronic alcoholism) received by hospitals in the larger cities."

In recognition of these dangers the national government requires that the drugs be labelled as "habit forming." This obviously does not deter the individual who wishes to use them. Twenty-seven states have also passed laws governing their use. Usually they forbid over-the-counter sales and limit their use to the prescriptions of doctors. Apparently no special records of prescriptions are kept and there is little provision for the investigation and supervision of sales, such as in the case of narcotics, and it is doubtful whether present control is sufficient.

PATHOLOGY

According to Gonzales and associates[4] the necropsy findings are not distinctive. "There is cyanosis, marked congestion, and general engorgement of the viscera. The lungs are congested, edematous, and frequently show a hypostatic pneumonia as a result of the coma. The kidneys have been described as showing degeneration of the convoluted tubular epithelium, and petechial pelvic hemorrhages. Bilateral symmetrical areas of softening were seen in the anterior portion of the right and left globus pallidus in one case of barbiturate poisoning necropsied." The diagnosis often depends upon detecting the drug in the urine or in the brain, kidneys, liver and spleen.

TREATMENT

The following general measures should be carried out: Evacuate and wash out the stomach with permanganate solution, 1:3,000; intravenous infusions of normal salt and dextrose solutions; artificial respiration and inhalations of oxygen by nasal catheter. Strychnine may be given as a stimulant. Suction should be used for secretions which accumulate in the pharynx.

In 1937 Murphy and associates[5] published the results of treatment of barbiturate poisoning with picrotoxin. This was suggested by the work on animals by Maloney, Fitch and Tatum who had found picrotoxin to be the most efficient antidote for poisoned animals. Murphy reported two patients who were successfully treated with intravenous injections of 0.2 per cent solution of picrotoxin. They recommend 0.2 per cent solution in water or normal salt solution and start with 5 milligrams of picrotoxin (2.5 cubic centimeters of 0.2 per cent solution); this should be repeated in 20 to 30 minutes. If the patient still shows no effects, 10 milligrams more may be given. Signs of improvement are awakening effect, improvement in muscle tone, circulation, and respiration. The first toxic symptoms of picrotoxin are twitches, and if they appear the picrotoxin should be discontinued until the patient is again lethargic. Then treatment may be resumed but in doses of 3 to 5 milligrams until the patient emerges from coma. In some patients 10 milligrams is adequate while in others 150 to 200 milligrams may be required over a period of forty-eight hours. The treatment requires constant medical watching of the patient. Murphy emphasizes that picrotoxin should be used only after the diagnosis of barbiturate poisoning is certain and only when the patient is comatose.

In conclusion, it may be said that the control of barbiturate addiction largely rests with the medical profession. First, the physician should determine the cause of the insomnia and not merely treat it as a symptom, which is so often done. Second, under no circumstance should the patient be told the name of the drug being prescribed. Third, a prescription for the barbiturates should be refilled only under the same conditions which govern the refilling of prescriptions for morphine. Finally, when prescribing drugs which may be habit forming, every practitioner should bear in mind that prevention is better than cure, and, if the patient has any psychopathic stigmata, they should be prescribed only when all other methods of treatments are exhausted.

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STATE DEPARTMENT OF HEALTH

Walter L. Bierring

DOCTOR UNDERWOOD IN IOWA

Physicians who attended the seventeenth annual meeting of the Iowa Public Health Association, held April 27 at Hotel Kirkwood in Des Moines, had the rare privilege of hearing Felix J. Underwood, M.D., Executive Officer of the Mississippi State Board of Health, Jackson, Mississippi. Dr. Underwood visited Iowa under the auspices of the American Public Health Association, of which he is president-elect.

Printed in the scientific section of this issue of the JOURNAL, page 301, is the article entitled "Public Health Today," one of two papers presented by Dr. Underwood while in Iowa.

Dr. Underwood's paper with the title "The Rôle of the Public Health Nurse in the War Effort," was presented at a special noon luncheon meeting of the State Organization for Public Health Nursing. Dr. Underwood stated in part:

"All world crises have presented challenges to individuals and to nations, but I do not believe that ever before during your or my lifetime has the challenge been so great as the present one. Although our horizon seems temporarily clouded and many hoped-for objectives are obstructed, we have the knowledge gleaned from history that people rise to their best during emergencies and consequently achieve lasting good which helps to offset in some measure the tragic toll of the battlefield. Public health workers, because of their training and the important advances in preventive medicine, will find unlimited opportunities to participate in these lasting contributions wherever they may choose to serve. Each of us has a vital job to do and I have faith that the public health nurses will continue to advance, proving themselves well equipped to cope with the problems which now confront us. If we could liberate mankind from some measure of the disease, poverty and ignorance which beset him, that would be an important victory indeed!"

CURATIVE SERUM FOR SPOTTED FEVER

Topping[1] of the United States Public Health Service has recently reported results of treatment of 71 cases of Rocky Mountain spotted fever with the therapeutic use of hyperimmune rabbit serum.

Beginning his observations toward the end of the tick season in 1940, Topping continued his studies during 1941 and 1942. Attending physicians in the eastern, midwestern, and western states made the diagnosis and administered the therapeutic serum to the patients comprising the series of cases. None of the patients had previously received preventive treatment with spotted fever (chick embryo) vaccine.

The 71 cases are considered in two groups, namely, 52 patients who were treated with immune rabbit serum before the third day of the rash (group A), and 19 patients who did not receive serum until after the third day of the exanthem (group B).

Two deaths occurred in group B, a case fatality of 10.5 per cent; one of those who died was under fifteen years of age, the other over forty. There were also two deaths in group A, but the larger number (52 cases) reduced the mortality rate to 3.8 per cent, and there were no fatalities among 40 of the 52 patients who were under forty years of age.

METHOD OF ADMINISTRATION

The recommended procedure with immune rabbit serum is as follows: (1) A conjunctival test using normal rabbit serum is done to determine sensitivity to rabbit protein; (2) One cubic centimeter of rabbit serum is administered intramuscularly when the conjunctival test is negative (no reaction in ten minutes); (3) Five cubic centimeters of serum are given intramuscularly after ten minutes; followed by (4) remainder of the total dosage of 40 cubic centimeters intramuscularly; (5) additional serum may be used as indicated, after an interval of ten to twelve hours.

Topping concludes his report with the statement that "anti-Rocky Mountain spotted fever

serum should be considered as offering hope in the treatment of this disease, particularly if administered early in its course."

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IMMUNE RABBIT SERUM AVAILABLE

Physicians who may see a case or suspected case of Rocky Mountain spotted fever are requested to notify the State Department of Health. Immune rabbit serum is available through the Department for the family unable to pay.

As stressed by Topping, serum, to be effective, must be administered during the first three days of the rash.

According to recent reports, sulfonamide drugs are not only ineffective but may be contraindicated in the treatment of Rocky Mountain spotted fever.

THREE CASES OF SPOTTED FEVER REPORTED IN IOWA

Three cases of Rocky Mountain spotted fever have been notified to the State Department of Health thus far in 1943 (June 22); one death occurred.

Case 1: E. R., a boy fourteen years of age, a member of a farm family in Warren county, began to complain May 26, 1943. The onset of illness was insidious with tired feeling, constipation, nausea and vomiting. A week later he had a chill and his temperature reached 104 degrees. A maculo-papular rash was first observed on the arms and face on June 3, and later covered the whole body.

The case was reported June 9 and was seen the same day by a representative of the State Department of Health, in cooperation with the attending physician. The patient's general condition was good; although afebrile at the time, he had had a chill the evening before, followed by fever (103 degrees). The lesions were brownish red, about pea-sized, and confluent to some extent over the buttocks. The rash was generalized, free from itching.

The patient gave no history of tick bite but had removed ticks from a dog and had worked under a tractor in a swampy area several days before taking sick. Timber and vegetation are not far from the house.

On June 16 the State Hygienic Laboratory reported positive agglutination (1:80) in the patient's blood serum. The nature of illness and the persistent character of the exanthem helped to establish the clinical diagnosis of Rocky Mountain spotted fever.

Cases 2 and 3: Investigation was made June 21, 1943, of two cases of spotted fever reported from Ottumwa (Wapello county).

R. P. B., a boy two years of age, had onset of illness June 6. When seen by the attending physician on the third day of illness, the patient had fever, neck stiffness, hyperesthesia, and was drowsy. The arms and legs showed a fine petechial rash; later the spots became purpuric. The lesions were discrete, but coalesced and prominent on the buttocks and legs. The child died June 16.

Mrs. J. B., thirty-five years of age, mother of R. P. B., had sudden onset June 11, with severe headache, fever (104 to 105 degrees) and chills. A rash resembling that of measles was present on the third day, large and small macules covering the chest, back, and abdomen. The patient became comatose, her condition was critical, and she was admitted to University Hospital. On June 22, the State Hygienic Laboratory reported the Weil-Felix test on the blood serum as positive in dilutions through 1:320.

Members of the B household live near a wooded area at the edge of the city. Two small dogs belonging to the family were tick-infested. The mother knew of no tick bite but had removed ticks from the child shortly before illness.

PREVALENCE OF DISEASE

Disease	May '43	April '43	May '42	Most Cases Reported From
Diphtheria	11	14	9	For the State
Scarlet Fever	200	340	131	Polk, Woodbury
Typhoid Fever	3	2	5	Johnson
Smallpox	7	4	3	Jasper, Polk, Woodbury, Wright
Measles	978	1230	1166	Des Moines, Muscatine, Sioux, Woodbury
Whooping Cough	190	140	77	Black Hawk, Woodbury
Brucellosis	25	36	42	For the State
Chickenpox	263	251	414	Black Hawk, Des Moines, Dubuque, Story, Woodbury
German Measles	910	1261	16	Des Moines, Dubuque
Influenza	3	6	1	Clarke, Mitchell
Meningitis (Meningococcus)	10	15	1	Woodbury
Mumps	369	517	441	Boone, Des Moines, Story, Webster, Woodbury
Pneumonia	46	38	110	For the State
Poliomyelitis	0	0	0	None
Tuberculosis	40	46	14	For the State
Tularemia	0	0	5	None
Gonorrhea	124	147	92	For the State
Syphilis	174	250	231	For the State

The JOURNAL of the Iowa State Medical Society
ISSUED MONTHLY

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OFFICE OF PUBLICATION, DES MOINES, IOWA

Vol. XXXIII JULY, 1943 No. 7

CAUDAL ANESTHESIA IN OBSTETRICS

One of the most promising in recent developments advanced by modern medical science, the progress of which is being watched with utmost interest by both lay persons (particularly women) and the medical profession alike, is continuous caudal anesthesia in the delivery of pregnant women. Undoubtedly this method of painless anesthesia is being carefully tried on a wide scale in most parts of the country, but thus far only few reports of its use have found their way into medical literature. Of special interest at the present time, therefore, is the report of Siever and Mousel in the June 12 issue of the *Journal of the American Medical Association*. The authors describe their experiences in three hundred unselected obstetric cases in which this type of anesthesia was employed. In 283 of these cases the anesthesia was successful; in twelve it was not, and supplementary anesthesia was necessary. No maternal deaths occurred in the entire group and only three babies yere lost, the causes of which were entirely unrelated to the anesthesia. Apparently no cerebral traumatic injury occurred among the newborn infants, since the authors state that all cried spontaneously on delivery and no untoward effects were noted. If subsequent experience bears out this increased safety for the newborn infant, caudal anesthesia will have much in its favor over the present methods of obstetric analgesics.

In the authors' series 276 of the patients were primiparas, four had breech presentations, twenty-eight had posterior positions, three had eclampsia, and there was one twin pregnancy. The average length of labor was increased from eight hours before the use of caudal anesthesia to fourteen hours with its use. It was necessary to perform episotomies on all primiparas, and to deliver 70 per cent of them by forceps. Multiparas had little difficulty in pushing out the baby when instructed to do so. The technic of producing caudal anesthesia which was found to be most efficacious is described in detail, and precautions are given for avoiding undesirable complications.

One's conclusions after studying this article is that caudal anesthesia, if properly managed, is successful in most obstetric cases and that danger to the fetus may be definitely reduced.

MEETING OF THE HOUSE OF DELEGATES OF THE AMERICAN MEDICAL ASSOCIATION

In spite of the difficulties of travel in wartime and the increased duties which have devolved upon every practitioner of medicine, 170 of the 174 members of the House of Delegates of the American Medical Association were present at the 1943 meeting held June 7, 8, and 9 in Chicago. Alaska, the Canal Zone, the Philippines, and Puerto Rico were the only sections not sending delegates. Such an attendance is a fitting commentary on the interest of the physicians of the country in the progress of medical science.

All meetings of the House were well attended; all matters received full and careful consideration; and many delegates appeared before the reference committees in support of or protest to the resolutions and reports which had been referred to them. Iowa was particularly interested in two matters: the corporate practice of medicine by hospitals, and the creation of a Committee on Medical Service. The crowd which came to discuss the second subject was so large that the reference committee was forced to move to a more commodious room.

A full report of the meeting of the House of Delegates is to appear in the August JOURNAL; this will contain the official actions taken on various matters. In the meantime the highlights of the meeting may be mentioned. They include voting of the Distinguished Service Award to Dr. Elliott P. Joslin of Boston; the selection of Dr. Herman L. Kretschmer of Chicago as President-Elect (Dr. Kretschmer has been treasurer of the American Medical Association for ten years); and the choice of San Francisco for the 1946 (peacetime, it is hoped) session.

In summing up the meeting, it probably is not amiss to say that it was pervaded by a spirit of change or evolution. There was a definite demand for greater activity in meeting social and economic changes, for departure from old conservatism to a more dynamic policy of public relations. One could not help but be impressed by the integrity of the reference committees in con-

sidering the problems presented to them. Theirs was no easy job, but it was the consensus of those present that their reports and recommendations were honestly and carefully made and reflected truly the sentiment of the House.

After attending such a meeting, one cannot help but wish that the House of Delegates of the Iowa State Medical Society worked along similar lines so that more time might be spent in considering important matters and making decisions. The annual meeting affords the one opportunity of the year for Iowa physicians to express their opinions on current problems and transact their business. By the time the House is called to order about four in the afternoon, the delegates are tired and hurried; they have less inclination to enter prolonged discussions; and their is a tendency to rush the meeting to completion. It is probably true that the system has worked satisfactorily throughout the years, but after sitting with the House of Delegates of the American Medical Association one cannot help but be impressed by the opportunity it affords for thoughtful consideration of all problems presented to it.

FURTHER COMPLICATIONS RESULTING FROM SULFONAMIDE THERAPY

For some time now the Journal has been at pains to draw attention in these columns to reports of untoward effects which have been observed following the use of the various sulfonamides. That all of the dangers from the use of these drugs have not as yet been exposed is obvious from the citations of experiences which continue to appear in the literature. More recently, instances of renal complications have been in the spotlight. Undoubtedly this is related to the increased clinical use of sulfathiazole because of its relatively lower toxicity and greater all-round therapeutic efficiency. However, the rapid absorption and excretion of this drug with resultant high concentrations in the urine, combined with its known decreased solubility, make for renal complications. Cases of anuria and of death as the result of sulfathiazole concretions in renal tubules, calices, and in the ureters have been reported by several observers. Nor has sulfadiazine, one of the newest in the family of sulfonamides, been altogether blameless in the matter of renal complications. Following the use of this drug, too, many cases of anuria and some deaths have been reported. It has now become rather generally appreciated that if blockage of the urinary pathways is to be avoided the fluid intake must be large, and that it is well to give sodium bicarbonate along with the sulfonamide since solubility is greater in an alkaline medium. Furthermore, it is important to record the output of urine. Whenever the total output falls below a certain desired level, the drug should be discontinued unless it is considered that the risk of the disease from which the patient is suffering is greater than from the risk of renal blockage. Anuria calls for pelvic and ureteral lavage and in most instances this, together with increased fluid intake, will be successful in reestablishing urinary flow.

Two cases in which unusual renal complications developed following sulfathiazole and sulfadiazine therapy are reported by Adams in the June 12 issue of the *Journal of the American Medical Association*. In each of these patients a calcareous radiopaque membrane formed on the epithelial surfaces of the calices and renal pelvis of a kidney partially or completely blocked by a small ureteral calculus. A total of thirty-one grams of sulfathiazole over a period of eleven days was given to the first patient, a man forty-eight years of age. Renal symptoms continued and a month after discontinuance of the drug a piece of dirty gray membranous material measuring four millimeters in diameter and three inches in length was passed. An excretory urogram two weeks later showed what appeared to be calculi in the renal calices. At operation no calculi were found. Because of an associated pyelonephritis the kidney was removed, and examination there showed the pelvis and calices to be partially covered by an adherent dirty gray membrane resembling the material passed in the urine two weeks before.

The second patient, a man sixty-three years of age, was given eleven grams of sulfathiazole over a four-day period and nineteen grams of sulfadiazine in the six following days. Urograms showed no shadows in the renal pelvis at the start of the sulfadiazine therapy, but films on the day following its discontinuance clearly showed a radiopaque membrane filling the pelvis and calices. Nearly a month and a half later the patient passed the membrane en masse. Scrapings from its surface showed sulfadiazine crystals. Subsequent x-ray films revealed an essentially clear renal pelvis. All symptoms cleared promptly. The author rightly warns against the indiscriminate use of sulfonamides in any case where urinary stasis exists.

PROFESSIONAL CONFIDENCE

The article entitled "Professional Confidence," which appeared in the June issue of the JOURNAL without signature, was offered by Clarence L. Heald, M.D., of Sigourney.

The first sentence of the second paragraph of the article should read: "Recently a patient, whom I had informed that he had syphilis, came to me in much distress of mind."

SOCIAL HYGIENE PROBLEMS IN WARTIME

Following is an address delivered by Lieutenant Colonel Thomas B. Turner, M.C., Chief of the Venereal Disease Control Branch, Preventive Medicine Division, Office of the Surgeon General, Army of the United States. Colonel Turner spoke on behalf of the American Social Hygiene Association before a meeting of executives of the National War Fund May 28, 1943, in New York City.

EDITOR'S NOTE: *The National War Fund is a federation of nineteen war-related philanthropies, including the American Social Hygiene Association, which have vested their fund-raising efforts in this one agency to avoid duplication of effort in fund-raising. Created at the insistence of community leaders everywhere for a unified effort to finance relief needs at one time and under one appeal, it meets philanthropic needs on the military front, the United Nations front, and the home front. From October 1 to November 20, six thousand communities throughout the country will conduct campaigns for the National War Fund and their local community services.*

I have been asked to speak to you this afternoon concerning the rôle of the American Social Hygiene Association in the control of venereal disease in the armed forces. My remarks will be directed largely to a discussion of three questions: First, is the American Social Hygiene Association making a significant contribution to venereal disease control in the army; second, if so, in what way; and third, why is it desirable that this work be done by a voluntary agency, why doesn't the government, with its vast financial resources, do it all?

To the first question, both as an individual and as a representative of the Surgeon General of the Army, I can say most emphatically that the Association is making an important contribution to the control of venereal disease in the army; that what measure of success we have had in reducing the occurrence of these diseases has been due in part to the generous and wholehearted assistance of this Association; that we are counting on it to continue its collaborative work and indeed expand it if possible; that we believe it would adversely affect the health and welfare of our army if the work of the Association were not continued.

The manner in which the Association is assisting in venereal disease control in the army can best be indicated by discussing some of the army's problems and how we are attempting to meet them.

It has been the experience of this and other nations that a sharp rise in the incidence of venereal disease among military personnel always attends the advent of war. With the beginning of mobilization of the Army of the United States the venereal disease rate rose above the preceding peacetime level. Fears that this might be the beginning of a disastrous upswing in these diseases were somewhat allayed by a slight decline in the rate for 1941. Although data on which to make exact comparisons are not yet available, it can be stated that the current incidence of venereal disease acquired after entry into service approximates the lowest level reached during the years preceding mobilization (approximately 25 per 1,000 per year), and the syphilis rate is substantially lower than that ever previously recorded (less than 5 per 1,000 per year). The over-all venereal disease rate is less than half the rate for any year of the last war. While these facts should not give rise to complacency, they are none the less distinctly encouraging, leading one to believe that in spite of the social disruption accompanying war, the peacetime gains in the fight on venereal disease may be maintained.

The venereal disease control activities of the past year have been characterized by three particularly noteworthy developments from the standpoint of the army. First, it was a period during which the medical aspects of venereal disease control were placed in the hands of specialists in preventive medicine. Soon after Pearl Harbor some of the best young physicians in civilian venereal disease control work entered the army and were assigned as venereal disease control officers to large camps and to the major headquarters of the army. Here they apply the principles of epidemiology to the problems of venereal disease control —determine where and under what circumstances soldiers are being infected, in what organizations the rates are highest, and what circumstances may lead to these high rates. Control efforts may thus be more sharply focused.

Second, the past year was a period during which collaboration between military and civil authorities reached a highly effective level. Venereal disease control officers of the army were in almost daily contact with officers of the United States Public Health Service, with state and local health department officials, and with representatives of other civilian agencies. Since the sources of infection for military personnel are in persons beyond the jurisdiction of the army, this collaboration is essential to an effective control program.

Third, the accomplishments in closing houses of prostitution have been most gratifying. Somewhat over a year ago unhealthy situations existed in the vicinity of many camps. Today "red light

districts" and wide-open brothels close to camps are the exception rather than the rule. This result has been attained principally through community effort, with the advice and assistance of the Social Protection Section of the Office of Defense Health and Welfare of the Federal Security Agency, the American Social Hygiene Association and its constituent societies, and with the substantial backing of military commanders.

So much for the recent past. What special tasks lie immediately before us? Perhaps the most important job in venereal disease control now confronting the army is the protection of our troops abroad. I am happy to say that the over-all rates for troops abroad thus far have been somewhat lower than the rate for the continental United States. But military necessities demand that troops operate in theaters where the civilian venereal disease rate is known to be high. Numerous measures have already been taken to protect those soldiers and the problem is receiving deep and continuous study. Some of the army's best trained venereal disease control officers have already gone abroad, and others are going every month. I venture to predict that we shall be able to afford protection to our soldiers abroad.

Here at home there are in my opinion three major jobs to be done in venereal disease control, in each of which the American Social Hygiene Association has an important rôle to play.

First, we must maintain the gains against organized prostitution. The army and collaborating agencies have had an uphill fight in convincing communities adjacent to camps that prostitution is a menace to the health and well-being of soldiers. Old beliefs die hard. Beliefs that men must have prostitutes, that prostitutes can be made safe and sanitary by medical control and that segregation and regulation, rather than repression is the way to handle the prostitution problem are held by many prominent citizens. These beliefs are based upon misinformation.

The fact that prostitution has existed since time immemorial often is advanced as proof of the futility of attempts at suppression. This is fallacious reasoning based partly on a misinterpretation of terms but chiefly on a lack of understanding of the quantitative aspects of disease occurrence. Few students of public health believe that malaria can be completely eradicated from this country in any foreseeable time, yet they do not hesitate to adopt those measures which will reduce its prevalence. While eradication of any disease is the hoped-for objective and efforts are directed toward that end, results short of eradication are by no means regarded as evidence of failure provided they do lessen the toll of human life and suffering. Prostitution is a social disease. While our objective is suppression, the result is repression and no one need decry the attainment of this limited objective, or doubt its value in reducing the prevalence of venereal diseases.

There are many reasons for regarding prostitution as undesirable and detrimental to the health, welfare, and efficiency of the army, but the most tangible measure of its ill effects is provided by the extent to which it gives rise to venereal disease. It may be possible to debate the moral issue involved, or to question the ill effect of prostitution on the spiritual well-being of soldiers, but no valid exception can be taken to the proposition that prostitution is a potent danger to the health of military personnel in that it enhances the risk of venereal infection. Viewing the over-all picture, no one in authority would wish to return to the situation that existed in many communities in the early days of mobilization.

But the roots of organized prostitution go deep and constant vigilance is necessary in order to detect its resurgence in a community, to keep interest alive and marshal support behind those far-sighted officials who believe that good government is good politics. In this program the American Social Hygiene Association plays a vital rôle. In the first place, it has over a period of years developed a staff of investigators trained to make surveys of prostitution conditions. During 1942 the Association made 680 confidential investigations in 526 communities. These reports serve as a basis for action and are a necessary part of any program directed to prostitution repression.

In addition, the Association is fulfilling a most important function in mobilizing public opinion behind the repression program. The program cannot succeed without a wide educational campaign directed toward creating a public demand for enforcement of existing laws and for the enactment of additional legislation where this is necessary.

Second, I would put education—education of the soldier and education of the girls with whom our soldiers will associate. An educational program has long been in operation in the army and it would be difficult to find a soldier who does not know a good deal about venereal disease and the dangers of promiscuous sex relations. This educational process is now being greatly expanded. It is imperative that similar informational material be made available to the young women of the community. Contrary to the position held by some, one does not have to be afraid of the effects of knowledge concerning sex hygiene and venereal disease on this group. For knowledge will carry

with it an understanding and an orientation from which only good can flow. I believe that organizations such as the American Social Hygiene Association should take the lead in this educational work.

The third job to be done is to study social factors that enhance the risk of venereal infection. We still have little or no understanding of these factors, yet this information must be at hand before adequate corrective measures can be developed. Organized prostitution is no longer contributing a major portion of the army's infections. Most of the infections are acquired from girls who are not common prostitutes, and under circumstances where the profit motive seems not to be a determining factor. Is this, then, merely a manifestation of the exuberance of youth influenced by a wartime psychology? Or are other social factors, which are capable of being studied and analyzed, largely responsible for this situation? As the latter seems more likely to be the case, careful and prompt study of these factors is imperative. While such a study is certainly a job for experts, lay organizations can give great encouragement and assistance in furthering them.

Concerning the last of the three questions posed; namely, why is it desirable to have a voluntary agency cooperate with the army in its venereal disease control program, the answer is clear. In the final analysis the control of venereal disease is a local affair. The medical and public health facilities, the type of law enforcement, the approach to the social aspects of the problem are determined largely by the community concerned. Programs can be devised and even funds provided from the national level, but action is usually inadequate unless the will of the community staunchly supports the program. In the cooperative effort between the army on the one hand and local communities on the other, it is exceedingly valuable to have a non-governmental voluntary agency to make objective surveys of conditions and to use its influence toward the betterment of conditions.

The constituent societies of the Association, while organized through the stimulus of the Association, are really an integral part of the community. Experience has shown that public opinion responds much more readily to local groups of this sort, than to efforts of governmental agencies particularly those operating on a federal level. It seems highly important to preserve intact this voluntary agency, the American Social Hygiene Association, whose sole function it is to assist in an informed and objective way in the prevention of venereal disease among our young men and women both in civilian communities and in the army.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

Meeting of the Medical Economics Committee June 20, 1943

The Medical Economics Committee of the Iowa State Medical Society met in the central office in Des Moines, Sunday morning, June 20, 1943, with the following persons present: Doctors B. B. Parker of Centerville, H. E. Stroy of Osceola, H. D. Fallows of Mason City, and Martin I. Olsen of Des Moines, committee members; R. B. Bernard and A. D. Woods, delegates to the American Medical Association; L. R. Woodward, president, and M. C. Hennessy, president-elect; A. L. Jenks, and Mr. E. M. Kingery of the Polk County Medical Society; Messrs. E. P. Lichty, J. F. Rosenfield, J. D. Brien, J. P. Van Horn, and Dr. G. M. Crabb of Hospital Service, Inc., of Iowa; and Dr. Channing G. Smith, Medical Consultant to the State Board of Social Welfare. In the absence of the chairman the meeting was called to order by the executive secretary, who explained the purpose of the meeting and asked Dr. Parker to preside. Dr. Channing Smith explained the operation of the old age assistance law and its probable expansion, asking for advice and suggestions. It was proposed that further education was needed and he was asked to prepare an article for the JOURNAL setting forth the pertinent facts of the program.

Hospital Service, Inc., was then given the floor to explain its proposal to extend the benefits in its contract to include x-ray, electrocardiograms, anesthesia, etc. The delegates to the American Medical Association then reported on action taken at the recent meeting of the House of Delegates in Chicago in regard to this, and the Medical Economics Committee then went into closed session. It was decided that the committee approved the extension of the benefits, but that it was opposed to the interjection of a third party (the hospital) between the insurance company and the doctor. Consequently, its recommendation to Hospital Service, Inc., was that the insurance company should pay to the hospitals their portion of the expense incurred in providing such services, but pay no fees for actual medical service rendered by a doctor except direct to the doctor. The representatives of Hospital Service, Inc., were recalled and told of the decision of the committee. They accepted it and will present it to their Board and report back to the State Society so that the matter may be referred to the Executive Council for final vote.

Meeting adjourned at two-fifteen p. m.

THE OFFICIAL ISSUE

This issue of the JOURNAL carries the Minutes of the Ninety-second Annual Session, the Transactions of the House of Delegates, the roster of members of the Iowa State Medical Society in good standing as of June 25, 1943, the roster of Iowa physicians in military service, and the roster of Fifty-Year Club members. Save this JOURNAL for future reference.

Minutes of the Iowa State Medical Society Ninety-second Annual Session

April 29 and 30, 1943

Thursday Morning, April 29, 1943

The opening session of the Ninety-second Annual Session of the Iowa State Medical Society, held at the Hotel Fort Des Moines in Des Moines, April 29 and 30, 1943, was called to order by the president, Dr. Frank P. Winkler of Sibley, at nine-fifteen a. m.

Dr. James A. Downing, president of the Polk County Medical Society, welcomed the physicians to Des Moines, and Dr. Walter A. Sternberg of Mount Pleasant, first vice president of the Iowa State Medical Society, responded for the Society.

Dr. Harry L. Smith of Rochester, Minnesota, presented the opening paper of the meeting on "Coronary Disease: Its Recognition and Management." Following this paper there was a brief intermission to visit the exhibits, and then Brigadier General Charles H. Grahl, State Director of the Selective Service System, addressed the assembly on "Medicine in the War Effort." He was followed by Dr. Arthur W. Proetz of St. Louis, Missouri, who discussed the subject, "Practical Management of Headache." The meeting adjourned at eleven-forty a. m. and reconvened at one forty-five p. m., at which time Dr. Frank P. Winkler gave his presidential address.

Friday Morning, April 30, 1943

The Friday morning session was called to order by the president, Dr. Winkler, at nine a. m. Dr. Virgil S. Counseller of Rochester, Minnesota, presented the first talk of the day on the subject, "Pelvic Surgery as Related to General Practice." Following Dr. Counseller's talk, Dr. Winkler installed Dr. Lee Roy Woodward of Mason City as the new president; the meeting then recessed for ten minutes and when it was called to order again, Dr. Harry L. Smith of Rochester, Minnesota, conducted a heart clinic, examining patients and showing films demonstrating certain points in cardiac disease. The final talk of the morning was on "Blood Banks in Iowa" and was presented by Dr. Elmer L. DeGowin of Iowa City and Dr. Carl F. Jordan of Des Moines. Dr. Parker gave the report of the Friday morning meeting of the House of Delegates, and announced the registration had been as follows: 546 members, 80 guests, 57 exhibitors, and 121 members of the Woman's Auxiliary, making a total of 804 registrants. The meeting adjourned at twelve noon.

Section on Medicine

Thursday Afternoon, April 29, 1943

The first session of the Section on Medicine held in connection with the Ninety-second Annual Session of the Iowa State Medical Society, at the Hotel Fort Des Moines in Des Moines, was called to order at two p. m. Thursday, April 29, by the chairman of the section, Dr. Matthew T. Morton of Estherville.

The following papers constituted the afternoon's program:

"Social and Medical Aspects of the Boys' Training School at Eldora, Iowa" by Dr. Ralph E. Gray of Eldora; discussed by Dr. Andrew W. Bennett of Iowa City and Dr. Fern N. Cole of Iowa Falls.

"Care of the Premature Infant in General Practice" by Dr. Harold E. Farnsworth of Storm Lake; discussed by Dr. Clarence P. Phillips of Muscatine and Dr. Robert H. McBride of Sioux City.

"Malaria Endemic in Iowa" by Dr. Andrew W. Bennett of Iowa City; discussed by Dr. Milford E. Barnes and Dr. Willis M. Fowler of Iowa City.

"Surgery in Medical Emergencies" by Dr. Anthony C. Pfohl of Dubuque; discussed by Dr. Kenneth K. Hazlet and Dr. Frank J. Piekenbrock of Dubuque.

The meeting adjourned at four p. m.

Friday Afternoon, April 30, 1943

Dr. Raymond J. Harrington of Sioux City gave the first talk on the Friday afternoon program, presenting the subject, "Intrathoracic Tumors as a Diagnostic Problem." This was discussed by Dr. Benjamin F. Wolverton of Cedar Rapids and Dr. Albert A. Schultz of Fort Dodge.

"Tropical Medicine in Iowa in the Postwar Era" was the title of a paper by Dr. James A. Greene of Iowa City, which was discussed by Dr. Irving H. Borts of Iowa City.

A paper on "Early Diagnosis and Treatment in Tuberculosis" was presented by Dr. Paul O. Nelson of Emmetsburg and discussed by Dr. John C. Parsons of Des Moines.

The final paper of the afternoon, which was presented by Dr. Julian D. Boyd of Iowa City, was on the subject, "Body Measurements in Physical Diagnosis." This was discussed by Dr. Arnold M. Smythe of Des Moines.

The meeting adjourned at four p. m.

Section on Surgery

Thursday Afternoon, April 29, 1943

The opening session of the Section on Surgery, held in connection with the Ninety-second Annual Session of the Iowa State Medical Society, was called to order by the chairman of the section, Dr. Walter R. Brock of Sheldon, at two-fifteen p. m. Dr. Frank R. Peterson of Iowa City opened the afternoon session with a discussion of "The Management of Peptic Ulcers Requiring Surgery." This was followed by a paper prepared by Dr. B. Raymond Weston of Mason City on the subject, "A Surgical and Clinical Contribution to Right Sided Pain." The discusser of this paper was Dr. Harold W. Morgan of Mason City.

"Delayed Bone Grafts" was the subject of a paper by Dr. Edmund S. Donohue of Sioux City; discussers were Dr. Lewis M. Overton of Des Moines and Dr. Arthur Steindler of Iowa City.

The final paper of the afternoon was on "Surgery of the Colon." It was presented by Dr. John B. Synhorst of Des Moines and was discussed by Dr. Erwin J. Gottsch of Shenandoah.

The meeting adjourned at four-thirty p. m.

Friday Afternoon, April 30, 1943

Dr. Virgil S. Counseller of Rochester, guest speaker for the section, was the first speaker Friday afternoon, discussing "Management of Acute Cholecystitis."

"The Use of Sulfonamides on Open Wounds" was the second paper on the program. This was presented by Dr. Lewis M. Overton of Des Moines and was discussed by Dr. Keith M. Chapler of Dexter.

Dr. John W. Dulin of Iowa City spoke on "The Use of Stainless Steel Wire as Suture Material." Discussers were Dr. Earl D. McClean of Des Moines and Dr. Elwood P. Russell of Burlington.

The final paper of the afternoon, which was presented by Dr. Christian B. Luginbuhl of Des Moines, was on the subject, "Acute Pulmonary Conditions Simulating Abdominal Disorders." Dr. Frank W. Fordyce of Des Moines discussed the paper.

The meeting adjourned at four p. m.

Section on Ophthalmology, Otology and Rhinolaryngology

Thursday, April 29, 1943

The opening meeting on the Section on Ophthalmology, Otology and Rhinolaryngology was called to order by the chairman, Dr. Jay C. Decker of Sioux City, at nine-thirty Thursday morning, April 29. Two papers were presented before the section: one on "Intra-ocular Neuritis" by Dr. Earl C. Montgomery of Atlantic, discussed by Dr. J. Kenneth von Lackum of Cedar Rapids; and the other on "Glioma of the Optic Nerve" by Dr. F. Harold Reuling of Waterloo, discussed by Dr. James E. Reeder of Sioux City. At the conclusion of these papers, the section moved to the general session room where the guest speaker of the section, Dr. Arthur W. Proetz of St. Louis, Missouri, addressed the entire gathering on "The Practical Management of Headache."

In the afternoon the section met again, and the following papers were presented:

"Modern Methods in Nasal Therapy," by Dr. Arthur W. Proetz of St. Louis.

"Abnormal Retinal Correspondence," by Dr. Kenneth C. Swan of Iowa City; discussed by Dr. John H. Matheson of Des Moines.

"Staphylococcic Septicemia, Tonsillar in Origin," by Dr. John E. Rock of Davenport; discussed by Dr. John H. Tait of Des Moines.

"The Right to Hear" was the subject of a film and paper given by Dr. Dean M. Lierle of Iowa City; discussed by Dr. Cecil C. Jones of Des Moines.

The meeting adjourned at four-thirty p. m.

Transactions of the House of Delegates
Iowa State Medical Society, Ninety-second Annual Session
April 29 and 30, 1943

Thursday Afternoon, April 29, 1943

The first meeting of the House of Delegates of the Iowa State Medical Society, held in connection with the Ninety-second Annual Session, at the Hotel Fort Des Moines, Des Moines, April 29, 1943, convened at three forty-five o'clock, Dr. Lee Roy Woodward, President-Elect, presiding as Speaker.

The Speaker: The 1943 Session of the House of Delegates of the Iowa State Medical Society will now come to order. The first order of business is the roll call.

The Secretary: Mr. Speaker, I *move* that the signed cards constitute the roll call. The attendance record will be announced before the dismissal of the session.

The motion was seconded.

The Speaker: It has been moved and seconded that the signed cards constitute the roll call. All those in favor signify by saying "aye"; opposed "no." *The motion is carried.*

Delegates

Adair	E. K. Sexsmith
Adams	C. L. Bain
Appanoose	J. C. Donahue
Black Hawk	E. E. Magee
Boone	A. B. Deering
Buchanan	F. F. Agnew
Buena Vista	M. A. Armstrong
Calhoun	R. G. Hinrichs
Cass	G. A. Alliband
Cerro Gordo	H. D. Fallows
Cherokee	C. F. Obermann
Chickasaw	P. E. Gardner
Clarke	C. R. Harken
Clinton	R. J. Nelson
Dallas-Guthrie	S. J. Brown
Davis	C. H. Cronk
Decatur	G. P. Reed
Des Moines	F. G. Ober
Dickinson	T. L. Ward
Dubuque	J. C. Painter
Emmet	C. E. Birney
Fayette	C. C. Hall
Floyd	O. H. Banton
Fremont	Kenneth Murchison
Harrison	H. N. Anderson
Henry	W. A. Sternberg
Howard	W. A. Bockoven
Ida	R. B. Armstrong
Iowa	E. L. Hollis
Jefferson	J. S. Gaumer
Johnson	E. M. MacEwen
Johnson	G. C. Albright
Johnson	A. W. Bennett
Jones	H. F. Dolan
Keokuk	C. L. Heald
Kossuth	W. F. Hamstreet
Lee	B. J. Dierker
Linn	T. F. Suchomel
Madison	I. K. Sayre
Marshall	A. D. Woods
Monona	E. C. Junger
Montgomery	W. S. Reiley
Muscatine	L. C. Howe
Osceola	W. F. Thayer
Plymouth	W. J. Brunner
Pocahontas	W. F. Brinkman
Polk	R. C. Doolittle
Polk	W. E. Baker
Polk	L. F. Hill
Polk	H. W. Dahl
Polk	C. W. Losh
Pottawattamie	G. V. Caughlan
Ringgold	E. J. Watson
Sac	J. R. Dewey
Scott	W. C. Goenne
Story	E. B. Bush
Union	A. S. Beatty
Van Buren	L. A. Coffin
Wapello	C. A. Henry
Washington	W. L. Alcorn
Wayne	A. E. Davis
Webster	T. J. Dorsey
Winneshiek	F. A. Hennessy
Woodbury	C. T. Maxwell
Wright	R. D. Bernard

Alternates

Butler	J. G. Evans
Clayton	E. G. Kettelkamp
Greene	J. M. Jackson
Humboldt	C. A. Newman
Jasper	J. W. Billingsley
Linn	H. L. Van Winkle
Lucas	G. F. Niblock
Mahaska	K. L. Johnston
Marion	E. C. McClure
O'Brien	T. D. Kas
Palo Alto	G. H. Keeney
Poweshiek	O. F. Parish
Scott	L. V. Schroeder
Tama	F. T. Launder
Taylor	J. H Gasson
Woodbury	C. P. McHugh

State Society Officers

President	F. P. Winkler
President-Elect	L. R. Woodward
Secretary	R. L. Parker
Treasurer	J. A. Downing
Trustee	O. J. Fay
Trustee	J. I. Marker
Trustee	M. C. Hennessy
Councilor	L. L. Carr
Councilor	C. H. Cretzmeyer
Councilor	J. B. Knipe
Councilor	J. E. Reeder
Councilor	E. F. Beeh
Councilor	J. C. Hill
Councilor	H. A. Householder
Councilor	C. A. Boice
Councilor	R. C. Gutch
Councilor	J. G. Macrae
Councilor	R. L. Barnett

The Speaker: The next order of business is the approval of the minutes of the Friday morning session, 1942.

The Secretary: Mr. Speaker, I *move* that the minutes as published in the July JOURNAL be approved.

The motion was seconded.

The Speaker: It has been moved and seconded that the minutes of the Friday morning session as printed in the July JOURNAL be approved. Are there any remarks? If not, all in favor signify by saying "aye"; opposed "no." *The motion is carried.* The next order of business is the acceptance of the Handbook.

The Secretary: Mr. Speaker, I *move* that the reports as published in our Handbook be accepted by this body.

The motion was seconded.

The Speaker: It has been moved and seconded that the reports as published in the Handbook be accepted by the House of Delegates. Are there any remarks?

The Secretary: Mr. Speaker, the idea is to have these reports as published in the Handbook accepted by this House, since the delegates have had these Handbooks for study for nearly a month. The chairmen and officers may make supplementary reports as their names are called.

The Speaker: It has been moved and seconded that these reports be accepted. The usual procedure in the past has been to receive the reports and then vote on accepting each one of them separately. Under the present motion we are taking for granted we will receive the reports, and are voting to adopt what is

published in the Handbook. There is just one thing I know of in here which I think you should consider before you vote to accept these reports, and that is the report of the Committee on Constitution and By-Laws on the question of life membership. Is Dr. Henkin here? (Absent.) Will you read that report, Mr. Secretary, so that the delegates will know what is being done on that controversial question?

The Secretary read the report of the Committee as found on page 29 in the Handbook.

The Speaker: As far as I know, and I have read this carefully, this is the only report which makes any definite changes, and I wanted to call this to your attention so that you would know what you were voting on before you voted. Are there any other remarks? Are you ready for the question? All in favor of accepting the reports as printed in the Handbook signify by saying "aye"; opposed "no." *The motion is carried.*

Reports of Officers

REPORT OF THE SECRETARY

House of Delegates, Iowa State Medical Society:

The following report for the year 1942 is herewith respectfully submitted:

MEMBERSHIP

A tabulation of the membership record for 1942 will be found on the following pages, but it may be summarized as follows:

Active Members (Life Members included)	2,490
Delinquent Members	15
Eligible Non-Members	126
Ineligible Non-Members	64
Physicians Not in Practice or Retired	167

This shows we made a gain of twelve new members in 1942, a rather surprising gain in view of the fact that no new physicians were available to locate in the state during the year. We attribute the increase to the fact that non-members feel the need for membership and have once again become active in their county and state societies. Included in this figure of 2,490 members are our 165 life members and the 200 or so men whose dues were waived because they were in military service. Both of these groups are exempt from the payment of dues, a privilege to which we think both are entitled, and we mention the number only to give you an idea of how many there are. The number of men in service in 1943 whose dues will be waived will be much larger, of course, since there are about 600 or 650 serving from Iowa alone. The number of life members has remained stationary the last year because the rule regarding life membership has been in the process of being changed and it has not been possible to pass on any applications. We hope the ruling which received its first reading and approval last year will become law at the House of Delegates meeting in April, so that men who deserve life membership may be granted it.

We had five less delinquent members in 1942 than in 1941, 49 less eligible non-members, thirteen less ineligible non-members, and eight less retired physicians.

One Hundred Per Cent Counties

In 1941 we had 36 counties with one hundred per cent membership; in 1942 this increased to 41. Only one county which had 100 per cent membership in 1941 failed to achieve it in 1942, and that was Humboldt where one member failed to pay his dues. Six other counties returned to the honor roll; they are Black Hawk, Buena Vista, Des Moines, Marshall,

1942 MEMBERSHIP RECORD

County	1942 Membership	Delinquent Members	Eligible Non-Members	Ineligible Non-Members	Not in Practice or Retired	Percentage of Eligible Physicians Who Are Members
Adair	9	....	....	....	1	100
Adams	8	....	....	....	....	100
Allamakee	8	....	2	....	....	80
Appanoose	16	....	3	....	....	84
Audubon	10	....	....	....	....	100
Benton	19	....	1	....	1	95
Black Hawk	71	....	.....	6	2	100
Boone	20	....	....	2	....	100
Bremer	16	....	3	1	....	84
Buchanan	24	....	1	1	....	96
Buena Vista	18	....	....	....	1	100
Butler	13	....	1	....	....	93
Calhoun	20	....	....	....	1	100
Carroll	23	....	1	....	3	96
Cass	20	....	1	....	....	95
Cedar	11	....	4	....	....	73
Cerro Gordo	50	....	....	1	2	100
Cherokee	19	....	1	3	2	95
Chickasaw	16	....	....	....	....	100
Clarke	9	....	....	....	....	100
Clay	12	....	2	2	....	86
Clayton	16	....	4	....	1	80
Clinton	44	....	1	2	1	98
Crawford	12	....	2	....	....	86
Dallas-Guthrie	41	....	3	1	2	93
Davis	9	....	....	....	....	100
Decatur	7	1	3	....	....	64
Delaware	11	1	5	....	1	65
Des Moines	37	....	.....	1	1	100
Dickinson	12	....	....	....	....	100
Dubuque	71	....	2	....	1	97
Emmet	14	....	....	....	....	100
Fayette	25	....	6	....	2	81
Floyd	16	....	....	....	1	100
Franklin	11	....	2	....	....	85
Fremont	11	....	1	....	....	92
Greene	22	....	1	....	1	96
Grundy	12	....	1	....	....	92
Hamilton	17	....	1	....	1	94
Hancock-Winnebago	23	....	3	....	2	88
Hardin	24	....	....	....	5	100
Harrison	14	....	1	1	1	93
Henry	18	....	....	....	....	100
Howard	10	....	....	....	....	100
Humboldt	10	1	....	....	....	91
Ida	13	....	....	....	2	100
Iowa	10	....	4	....	4	71
Jackson	16	....	1	....	2	94
Jasper	21	....	3	....	2	88
Jefferson	17	....	1	....	1	94
Johnson	157	2	9	....	3	93
Jones	13	....	1	....	1	93
Keokuk	14	3	....	....	....	82
Kossuth	13	1	1	2	1	87
Lee	41	....	1	4	1	98
Linn	106	3	6	....	3	92
Louisa	9	....	....	....	2	100

County	1942 Membership	Delinquent Members	Eligible Non-Members	Ineligible Non-Members	Not in Practice or Retired	Percentage of Eligible Physicians Who Are Members
Lucas	13	....	....	....	1	100
Lyon	11	....	....	....	....	100
Madison	11	....	....	....	1	100
Mahaska	25	....	....	1	2	100
Marion	20	....	1	....	8	95
Marshall	46	....	....	....	2	100
Mills	10	....	2	....	....	84
Mitchell	12	....	3	....	....	80
Monona	15	....	....	....	1	100
Monroe	11	....	2	....	....	85
Montgomery	19	....	....	....	1	100
Muscatine	19	....	1	3	1	95
O'Brien	17	....	2	....	....	89
Osceola	11	....	....	....	....	100
Page	23	....	3	2	4	88
Palo Alto	13	....	....	....	....	100
Plymouth	14	....	4	....	2	78
Pocahontas	14	....	2	1	1	88
Polk	252	1	7	11	57	98
Pottawattamie	60	....	4	2	1	94
Poweshiek	20	....	....	....	....	100
Ringgold	6	1	1	....	1	75
Sac	19	....	....	....	....	100
Scott	90	....	....	8	5	100
Shelby	8	....	1	....	1	89
Sioux	17	....	1	....	....	94
Story	36	....	....	....	2	100
Tama	23	....	....	....	1	100
Taylor	7	....	....	....	1	100
Union	15	....	....	....	....	100
Van Buren	9	1	1	....	....	82
Wapello	46	....	2	2	....	96
Warren	10	....	2	....	1	83
Washington	20	....	....	....	....	100
Wayne	11	....	....	....	....	100
Webster	45	....	....	1	1	100
Winneshiek	17	....	1	....	1	94
Woodbury	118	....	3	6	5	98
Worth	5	....	....	....	....	100
Wright	23	....	....	....	2	100
Total	2,490	15	126	64	167	94.6%

Washington and Wright. Below are the names of the counties on the honor roll for 1942:

Adair
Adams
Audubon
Black Hawk
Boone
Buena Vista
Calhoun
Cerro Gordo
Chickasaw
Clarke
Davis
Des Moines
Dickinson
Emmet
Floyd
Hardin
Henry
Howard
Ida
Louisa
Lucas
Lyon
Madison
Mahaska
Marshall
Monona
Montgomery
Osceola
Palo Alto
Poweshiek
Sac
Scott
Story
Tama
Taylor
Union
Washington
Wayne
Webster
Worth
Wright

The total membership percentage is higher than it has ever been, 94.6 per cent, of which we may well be proud.

A breakdown of 100 per cent counties in the various councilor districts may be of interest and is therefore given: First District, three counties; Second District, three counties; Third District, five counties; Fourth District, four counties; Fifth District, four counties; Sixth District, five counties; Eighth District, five counties; Ninth District, four counties; Tenth District, high with six counties; and Eleventh District, two counties.

We are very grateful to the county society secretaries for the information they have furnished us twice a year about medical personnel in their counties. We try to keep our records up to date at all times, and would find it extremely difficult to do so were it not for the splendid cooperation given us by the county society secretaries. We hope the central office reciprocates by being as helpful when the county secretaries are the askers.

Care of the Indigent

The Medical Economics Committee started to make a survey of relief plans in force throughout the state, but due to the departure of the chairman for military service, the work is now at a standstill. Last year the Committee asked the House of Delegates to appoint a special committee to investigate the various types of and the demand for medical service plans, and to bring back to this House of Delegates a recommendation one way or another regarding them. The president appointed this committee and it met once, and then reported to the Executive Council on October 9. At that meeting the matter was discussed and it was finally voted to take no action for the duration of the war.

National Physicians Committee

At its meeting October 9 the Executive Council also discussed the National Physicians Committee (NPC) and it was finally voted that if the NPC would work in Iowa through our legislative committee, the Executive Council would endorse it. However, there was a strong feeling evident that if the NPC would not work in this manner, it should not be approved. The Executive Council authorized three Society officers to go to Chicago and talk to the NPC; this was done and arrangements are now being worked out whereby all work done by the NPC in Iowa shall be through a special committee appointed for that purpose.

State Society Services

We wish to repeat that your central office exists to serve every committee and every member. It is your office, and we want you to call upon it whenever you wish, both in person or by letter. We represent the 2,490 members of the State Society; and we can represent you more truly if we know your thoughts and opinions.

Financial Report

The secretary, in closing his report, wishes to remind you that the By-laws make him responsible for collecting dues and other Society income. This has been done and the funds so accumulated turned over to the treasurer whose report will follow.

Robert L. Parker, Secretary

REPORT OF THE TREASURER

House of Delegates, Iowa State Medical Society:

Herewith I give you the detailed financial statement of the Iowa State Medical Society for the year 1942. In order to make this as easy to understand as possible, I have listed the various sources of income and expense, showing where we receive our income and how we spend it through the various committees and departments. A study of these figures will show they reflect the activity of the State Society. The report of the Board of Trustees explains the financial policy of the Society and warrants your careful study. The trustees are entrusted with the responsibility of administering the funds of the society, and the treasurer is their agent.

The financial statement of the Society is as follows:

INCOME AND EXPENSE ACCOUNT

INCOME		
Annual session		$ 3,277.50
Dues		21,450.00
Interest on Savings		87.36
Interest on Bonds		1,092.50
Journal—		
Advertising	$7,617.21	
Reprints	1,003.67	8,620.88
Speakers Bureau, Fees		1,108.76
Miscellaneous		175.54
TOTAL INCOME		$35,812.54
EXPENDITURES		
Administrative Miscellaneous		$ 1,174.29
Annual Session		3,226.91
Bank Charges		2.45
Council		425.32
County Society Services		40.84
General Salaries		5,295.85
Journal—		
Salaries	$3,236.80	
Printing and Engraving	8,774.83	
Reprints	812.54	12,824.17
Legislative Committee		4,500.00
Medical Economics Committee		38.35
Medicolegal Committee		250.00
Other Committees		1,403.88
Rent and Office Supplies		1,805.01
Speakers Bureau—		
Office Supplies, etc.	$ 194.79	
Postgraduate Courses	850.46	
Radio Talks	583.99	
Salaries	1,226.75	
Travel	92.28	2,948.27
Stationery and Printing		497.86
Trustees		187.95
TOTAL EXPENDITURES		$34,648.15
EXCESS INCOME OVER EXPENDITURES		$ 1,164.39

Investments and total funds are shown in the following analysis and summary:

Net Income for year 1942	$ 1,164.39
Cash in bank at beginning of year	4,868.69
Bonds on hand at beginning of year (cost)	48,491.09
TOTAL FUNDS	$54,524.17

Represented by:

Cash in Bank:		
Bankers Trust Co. (Treasurer's Account)	$ 232.37	
Bankers Trust Co. (Secretary's Account)	1,929.76	
Bankers Trust Co. (Savings Account)	2,870.95	$ 5,033.08
Treasury Bonds:		
2% due 3-15-50 (Par value)	$25,500.00	
2½% due 12-15-53 (Par value)	5,000.00	
2¾% due 6-15-54 (Par value)	5,000.00	
3% due 9-15-55 (Par value)	9,000.00	
Less discount on purchase of bonds	8.91	$44,491.09
U. S. Savings Bonds (Maturity value $4,000.00)		3,000.00
U. S. Defense Bonds due December, 1953, 2½% Series G		1,000.00
U. S. Defense Bonds due January, 1954, 2½% Series G		1,000.00
TOTAL CASH AND BONDS (as above)		$54,524.17

James A. Downing, Treasurer

REPORT OF THE BOARD OF TRUSTEES

To the Members of the House of Delegates of The Iowa State Medical Society:

To the House of Delegates of the Iowa State Medical Society the Board of Trustees respectfully submits its report covering the work of the past year. This report, together with the reports of the officers, the standing committees, the special committees, and the committees of the Council of the Iowa State Medical Society, are published in the Handbook, not in order that they may be buried in the Society archives as a part of our historic past, but that they may be given careful study and thus contribute to a useful present and a greater future. The activities of these officers and these committees bear a definite relationship to the work of the Board of Trustees and to the conduct of your Society.

The Board of Trustees held meetings in February, March, April, July, August, October, and December, 1942. At each meeting all of the members of the Board were present except at the July meeting when Doctor Hennessy was taken ill after arrangements for the meeting had been concluded, and the December meeting when Colonel Marker's heavy duties kept him away. In each of these cases the absent member was informed in detail of all business considered, and his advice and counsel obtained.

All meetings have been held at the central office. In accordance with the exigencies of the war effort, whenever possible business has been conducted by letter and by telephone and the number of meetings thus kept to a minimum.

The Central Office

The personnel of the central office has been extremely busy during the past year. Aside from increasing routine office work, the war has brought many new tasks. This increased load has been essential to the part which the Iowa State Medical Society desires to take in the war effort.

In the central office the Board of Trustees employs three persons to carry on the work under the direction of the Society's officers and committees. Miss Mary McCord is the executive secretary. Hers is the task of coordinating the work of the various committees which she serves as secretary. She must at all times be informed of all the activities of the Society, and is in general charge of the central office.

Mrs. Dorothy Dolk is assistant to the editor of the Journal of the Iowa State Medical Society, and has charge of most of the details incident to its publication. Her work is especially difficult at this time because the authors of many of the papers which are being currently published are now in service and it is impossible to contact them when the proof sheets must be read. Another problem is presented by the decrease in the number of papers now being submitted for publication.

Miss Alma Jensen is secretary of the Speakers Bureau. The work of this Bureau has decreased greatly, and it is to be foreseen that there will be little activity during the time that all activities must center about the war effort. However, the Board of Trustees feels that a skeleton organization should be maintained in order that we may be prepared to arrange postgraduate courses, to provide speakers for lay groups, and to carry forward the planned work of this Bureau as soon as national conditions permit. Miss Jensen is also in charge of membership records, and helps with the work in other departments, particularly with proofreading.

It is not possible to give a clear picture of the work of the personnel of the central office in any report since an essential part of this work is the ability to meet any call, any need that arises. There are many conferences, many interviews, and much correspondence incident to the efficient conduct of the work of the office. Although each member of the office force is responsible for the work of certain departments, each one is also familiar with every other department, and in an emergency can throw her energy to its particular task. It is now possible to send a form letter to each member of the Society within a period of six or eight hours. This ability to keep in close touch with the entire membership is particularly important in connection with the work of the Legislative Committee while the Legislature is in session. Its value is in direct ratio to the spirit of cooperation of our members.

Income and Expenditures

The financial report of the Society has been audited by William Widdup and Company, and this audit is now on file at the central office where it is open to inspection by any member during office hours. Because of the expense that would be involved, it seems unwise to publish this report in detail, but certain items are of so much importance that they merit special mention here. The gross income from all sources for the year 1942 was $35,812.54; income received from dues, $21,450.00; income from advertising, reprints, interest, Speakers Bureau and miscellaneous sources totaled $14,362.54. Total expenditures were $34,648.15 so that our income exceeded disbursements by $1,164.39.

However, a very different situation is to be anticipated this coming year. There will be a sharp reduction in gross income in 1943. A large number of our members are now in service, and that number is increasing so that the estimated income from dues has been reduced from $21,450.00 to $15,000.00, an estimated loss of $6,450.00. Our members must carry on at home for the 650 who serve their country in uniform; the men without uniform are called on for many wartime tasks; they face the need of conserving gas and rubber. Postgraduate courses are obviously out for the duration. The Speakers Bureau will be kept as a skeleton organization, but we must count on no income from it. Here is another loss of income of $1,100.00. We must anticipate other losses in income for 1943 so that in spite of sharply cut expenditures we face a large deficit.

General salaries will be $1,000.00 less than last year. The annual session, limited to only two days this year, will mean an anticipated saving of $780.00. The budget calls for a saving of $1,440.00 in the operation of the Speakers Bureau, of $300.00 on stationery and printing, of $60.00 in services to county societies. These economies total an estimated $3,580.00, but under our system of departmental accounting and budgeting, we find that estimated income still shows a deficit of $9,240.00 over budgeted expenditures.

The Board of Trustees does not believe that annual dues should be increased at this time when the active members of the society are called upon to face many other professional and personal problems, nor does it believe that any curtailment of our professional activities should be considered. While our colleagues are in their country's service, it is for us to carry on at home, to do everything within our power to maintain the standards of our profession against the time of their return. The Iowa State Medical Society has been building up a reserve against a possible emergency. The Board of Trustees believes that we now face such an emergency, and that the interests of our profession warrant using such part of our reserves as may be required to meet the anticipated deficit. The Board therefore recommends that dues for 1944 be $10.00.

Respectfully submitted,

Oliver J. Fay
John I. Marker
M. C. Hennessy

REPORT OF THE CHAIRMAN OF THE COUNCIL

No meeting of the Council was called this year; all necessary work was carried on by correspondence. Two meetings of the Executive Council were called by the president of the Iowa State Medical Society and for these I refer you to the report of the secretary of the State Medical Society.

James E. Reeder, Chairman

REPORT OF THE FIRST COUNCILOR DISTRICT

National defense and medical preparedness have been given first place over the usual county activities. The shortage of doctors is really being felt and in some counties the bottom of the barrel has been reached as far as more doctors for the armed forces are concerned. Much credit must be given to the older doctors who are carrying on in their communities and giving of their time and strength almost to the breaking point.

The severe winter and icy roads in northeastern Iowa have also added to the doctors' problems. We have now had seventy-five days of poor roads and no doubt will have six weeks more. This condition has also limited the county society meetings to a great extent. With all of this, however, I have heard practically no report of any community not getting medical care. This, after all, is of first importance, during these war conditions. I have great faith in the doctors of my district, and believe all is being done that is humanly possible, both for the good of the medical society and also the war effort.

L. L. Carr, Councilor

REPORT OF THE SECOND COUNCILOR DISTRICT

The reports received from the deputy councilors of the counties comprising the Second Councilor District indicate that despite the unpleasantness going on in the world, organized medicine in this district is maintaining its high standards and is cooperating in the various immunization programs recommended by the State Department of Health and State Society committees. The various county societies seem to be satisfied with the working agreements set up between the boards of supervisors and themselves for medical care of the indigents. A number of members from the different counties have entered the service, but there have been no new physicians to take their place. A few doctors have changed their locations. On the whole, the situation in this district is generally satisfactory—in fact, considering world conditions in general, our own seems very good.

C. H. Cretzmeyer, Councilor

REPORT OF THE THIRD COUNCILOR DISTRICT

It is my pleasure to report that conditions in the Third Councilor District are very good from a medical standpoint considering the fact that we are in a war which is naturally disturbing to normal conditions of all kinds. We have a fine record of membership in this district; in several of our counties every eligible practitioner is a member of the county society, thus making it 100 per cent in membership. Most of the county societies have been functioning about as usual. On account of traveling conditions, perhaps some have not had as many meetings as formerly but all have had some and one county, Pocahontas, has held regular monthly scientific programs and meetings throughout the year.

Every county in the district has lost medical men to the armed forces and the physicians remaining at home are of necessity working harder and longer hours. I have heard of no locality in the district, however, where the people are suffering from want of adequate medical care and, unless the medical ranks are further depleted, I believe we will be able to "carry on" in a satisfactory manner in this area.

Most of the counties have conducted successful immunization programs during the year and the majority of them were active in sponsoring the tuberculosis program in their communities. Dickinson county was host to the summer meeting of the Upper Des Moines Medical Society which was held at Templars Park, in August. It was very well attended. During the early fall, the Palo Alto County Medical Society gave a testimonial dinner in Emmetsburg in honor of Dr. Herbert M. Huston of Ruthven who had practiced the science and art of medicine in that county for over fifty years. He was presented with a fifty-year certificate by a representative of the State Society, with appropriate ceremonies. O'Brien County sponsored a postgraduate course at Sheldon during the fall and early winter. All in all, I feel that in spite of abnormal war situations which compel us to work harder and get around less, we are holding high the banner of organized medicine in this district and will continue to do so for the duration and after the war.

J. B. Knipe, Councilor

REPORT OF THE FOURTH COUNCILOR DISTRICT

The Fourth Councilor District has very little to report except that there are very few medical men of draft age left in the district who might be available for military service. None of the county secretaries has reported any unusual situation or activity. Woodbury County is holding regular monthly meetings. Although the program committee reports difficulty in acquiring out of state speakers, our meetings have been excellent so far.

James E. Reeder, Councilor

REPORT OF THE FIFTH COUNCILOR DISTRICT

The medical situation in the Fifth Councilor District is very satisfactory, considering conditions as a whole. During the past year many of our men have answered the call of the colors. Those of us left have done our very best to carry on. The work

has been hard, and many have worked to the breaking point and are in need of a much earned rest.

The road ahead is long and hard, and we must do our best to put forth a satisfactory medical service so that all who need medical care may receive it. People are beginning to realize the doctor is busy and is spending long hours in the care of the sick, and I believe they are calling only for urgent sickness. It seems to me that a little education along these lines will help a great deal in avoiding unnecessary calls. The counties have cooperated in the immunization program, but the rest of the activities have been somewhat neglected.

E. F. Beeh, Councilor

REPORT OF THE SIXTH COUNCILOR DISTRICT

Another year has come to a close. Scientific meetings of high grade have been held throughout the Sixth District. These have been held in Cedar Falls, Gladbrook, Marshalltown, Eldora, Waterloo, Grinnell, Newton and Tama. Lectures were given in a great variety of subjects, including arthritis, peripheral vascular disease, office gynecology, infant feeding, cholecystitis, nephritis, venereal disease control, x-ray diagnosis and therapy, the sulfonamides, coronary heart disease, pneumonia, treatment of diabetes and a meeting on Procurement and Assignment of physicians for war duty. In addition many other scientific subjects were discussed. County programs were presented and much interest was taken in scientific recordings. Joint meetings were held in Poweshiek and Jasper and in Marshall and Tama Counties.

Our district has been the recipient of four distinct postgraduate courses during this past year. Taking into consideration the absence of so many members in the armed forces the attendance has been excellent.

We feel grateful indeed for the many meetings arranged by the Speakers Bureau of our State Society. Our district has been especially favored during the year. We regret that the Bureau is unable to continue the usual postgraduate courses. This will necessitate greater society activity on the part of the county organizations. We must keep the fire on the altar burning. It must not go out. We should keep our eyes open to the scientific awakening that shall be a part of the postwar reconstruction period. We must have the faith of saints in our consecration to the duties on the home front till that great day comes. Things with us will be different.

We would pause to remember those of our number who have accepted the call into the armed forces of the nation. All honor to them. They have solved a major problem of life, and are doing their full share in preserving the pattern of our nation conceived by our forefathers, and in building our American social, economic and religious order into a more congenial home for the human spirit.

James C. Hill, Councilor

REPORT OF THE SEVENTH COUNCILOR DISTRICT

In spite of the fact that we are a nation at war and the personnel of the medical profession has been very depleted by enlistments in the Medical Corps of the different services, we of the medical profession have been able to carry on some public health measures such as inoculation and vaccination against the preventable diseases. The doctors of the district, especially the older ones, have found it necessary to get back into more active practice, and in some instances men who have been specializing have had to include in their activities some general practice. Taken as a whole I think the public has tried to cooperate with the doctors in their limited time and heavier burdens, and has avoided calling physicians at night and over the nearly impassable roads except in extreme emergencies. Those of the medical profession not eligible for active service in the armed forces are carrying on at the home front in a manner befitting the spirit of a true democracy.

H. A. Housholder, Councilor

REPORT OF THE EIGHTH COUNCILOR DISTRICT

Each society in the Eighth District is keeping up its activity despite depleted membership and the increasing inability to secure outside speakers. Twenty-three per cent of the membership entered the armed forces in 1942. In Davenport, due to inability to secure interns in hospitals, the members have volunteered to take turns spending a night on call at the hospitals. Because of the location of an ordnance plant in Des Moines County and the departure of several doctors for the armed forces, there are left only 23 doctors to look after the needs of a population of about 50,000 persons. Lee County, which depends on outside talent for its meetings, will meet but twice a year. Van Buren County has only eight physicians left and not all of them are active. Their meetings are irregular. Jefferson County, as well as Washington County, has combined county society meetings with hospital staff meetings for the duration. Muscatine County met six times during the year and Henry County irregularly; there are only nine doctors left in this county. Louisa County keeps up its good record of having a dinner meeting monthly. Each of these counties has a satisfactory financial agreement with the board of supervisors for the care of the indigent; several, the exact number to be reported by Secretary Parker, have 100 per cent memberships. The effective society organizations will be maintained for the duration.

C. A. Boice, Councilor

REPORT OF THE NINTH COUNCILOR DISTRICT

Following is a report of the Ninth Councilor District for the year 1942.

All counties of the Ninth Councilor District have carried on their usual activities throughout the year,

holding their customary meetings, some monthly, with scientific programs being presented by members of their own county societies. One postgraduate course was held in Wapello County which was well attended not only by members of Wapello County but also of surrounding counties.

The membership record of the district is very good, there being five counties with 100 per cent membership and at least one county having 100 per cent fellowship in the American Medical Association. One district meeting was held relative to the NPC; a district chairman was appointed and he is awaiting instructions from the state chairman.

Relief continues to be a problem in some counties but the load is lighter and the contracts in most cases are more satisfactory than in times past. All counties have cooperated in the selective service work, donating very generously of their time. All counties in the district have their civilian defense program organized and have participated in the practice blackout. The Ninth District contributed a number of doctors to the armed forces in 1942 and will continue to do so as long as they are needed.

Numerous immunization programs for smallpox and diphtheria were held in the various counties and tuberculosis programs were carried out in most counties. One program included a tuberculin test for all high school pupils who requested it. In conclusion, the response to the cancer program continues to be very poor in this district and no particular work along this line has been done.

R. C. Gutch, Councilor

REPORT OF THE TENTH COUNCILOR DISTRICT

Although I lack the helpful reports customarily submitted by the deputy councilors, it can be safely assumed that the county societies are carrying on as faithfully under present conditions as is possible. The district, totally rural as it is, has suffered relatively greater in personnel, because most of the county societies (always limited in membership) have been depleted to a mere handful by the departure of doctors for the armed services. Notwithstanding the added burden, society activities such as examinations, immunization programs and those activities directed at furthering the public welfare have been carried out as in the past and the people may be sure the obligations and tenets of organized medicine will not be forgotten.

James G. Macrae, Councilor

REPORT OF THE ELEVENTH COUNCILOR DISTRICT

War demands of the armed forces have depleted the personnel of the medical profession very materially in the Eleventh Councilor District in the last two years. Some counties have lost more physicians than others and the burden of responsibility has been thrown on older men. Fremont County has but ten doctors in the county, all but one over fifty-five years of age. Dr. A. E. Wanamaker of Hamburg, seventy-seven years of age, says he "is still going strong for a man of his age." Pottawattamie County has seventeen doctors in service out of fifty-four in the county. All the eye, ear, nose and throat specialists in Council Bluffs were in service until recently when one man was released from active duty and returned to practice. Judging from information received from doctors in this territory, it would seem that this district cannot send many more doctors into service without jeopardizing efficient medical care of the civilian population.

Medical men have given liberally of their time in selective service examinations. The chief examiners have been ably assisted by volunteers, and by using a streamlined technic have increased the speed and ease of the examinations.

In all of the counties, the County Medical Society continues to function regardless of the skeletonized membership. Regular meetings are not held in some counties because doctors are too busy to attend. There seems to be a splendid spirit of cooperation between the doctors who remain at home. Our hats are off to the medical men who have so patriotically gone into military service to do their bit; it behooves us on the home front to maintain the organization of the county and state societies, and to fight for the private practice of medicine so that when these men return, they will not be forced to engage in state medicine.

R. L. Barnett, Councilor

REPORT OF THE DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

The high point of interest in the 1942 session of the House of Delegates of the American Medical Association was the address by Paul V. McNutt. His unstinted praise of the magnificent work accomplished by the officers of the American Medical Association, followed by the blunt statement that "The seriousness of the deficit in the number of physicians available for armed forces should not be underestimated. It must be met. It will be met by one method or another," made a profound impression upon everyone present. Every delegate realized that the problems to be met and solved during the present session were of momentous importance to the medical profession, that total war and its relation to organized medicine overshadowed all else, that social security with its ever-increasing dangers must, temporarily at least, be placed in the background, and that the one big problem was to assure medical and surgical service to our armed forces and yet provide adequate medical care for the civilian population.

Perhaps a word concerning the organization of the House of Delegates of the American Medical Association will not only be of interest but informative. The House is presided over by the Speaker, H. H. Shoulders, and the Vice-Speaker, R. W. Fouts. These men address the House on the first day and announce the reference committees which in reality

care for all routine work. They include the following: Sections and Section Work, Rules and Order of Business, Medical Education, Legislation and Public Relations, Hygiene and Public Health, Amendments to Constitution and By-Laws, Reports of Officers, Reports of Board of Trustees and Secretary, Credentials, Miscellaneous Business, Executive Session and Military Preparedness. All resolutions which are introduced in the House are referred to these committees. The committees act as a clearing house and their reports usually receive official affirmative action. Membership on these committees is restricted to men who have served several sessions and whose judgment has been found satisfactory. It may be mentioned in passing that Dr. T. F. Thornton has been chairman of the Rules and Order of Business Committee for the last two sessions. The work imposed upon these reference committees is arduous. They are frequently in session both day and night until their work is accomplished. Any doctor interested in the resolutions they are studying may appear before them, and may be sure he will be accorded courteous attention. The hearings and reports of these committees are a permanent record.

In scanning the report of the Board of Trustees I find the gross income in 1941 was $1,949,127.39, an increase of approximately $62,000.00 from the previous year. The expenses amounted to $1,715,779.75, an increase of approximately $27,000.00 for the year. This income is drawn from fellowship dues, subscriptions to magazines, advertising, plus interest on investments of approximately $77,000.00. It should be noted in passing that the funds of the Association have been very wisely invested and the Association's financial standing is beyond reproach. Special emphasis is made in this report upon the effectiveness of the press relations activity of the Association. It is very apparent the trustees consider this one of the most important parts of their work.

Time and space do not permit including a list of the various publications nor Council reports which are sent out from the home office. I wish to call your attention to the fact, however, that information is available through magazines or handbooks on almost any subject in which you are interested. More use should be made of this service.

The work of the Council on Foods and Nutrition, the Council on Industrial Health, and the Bureau of Health Education are of particular importance, and their reports are available at any time. The Bureau of Legal Medicine and Legislation is very active in compiling statistics concerning legislation throughout the United States and does not participate actively in sponsoring or opposing federal legislation. The Bureau of Medical Economics has been broadened extremely the past year. Dr. Leland has spent practically his entire time developing the Procurement and Assignment Service and this is probably the outstanding achievement of the Association from an economic standpoint. A department recently established by this Bureau deals with medical prepayment plans which should be very helpful in developing a plan or plans which could be applied to the various states.

The Board of Trustees is endowed with greater power than the trustees of our local society. Their judgment during the interim between sessions is final and is seldom questioned when their report is made before the House.

A new section on General Practice was presented this year for the first time. It was by all standards of comparison the most popular section of the convention and will undoubtedly be carried on from year to year.

The report of the Committee on Medical Preparedness of which Dr. Irvin Abell has been chairman since it was brought into being at the New York session, was given much attention. You will recall that this committee made a census of the physicians in the United States; this has been invaluable in the set-up of the Procurement and Assignment Service. This census showed that there are over 180,000 physicians in the United States and outlying territory, 176,000 in the continental United States. Practically 86,000 physicians are in general practice, 7,200 in full time appointments, and 9,800 are employed in some governmental agency. This committee is also responsible for the organization of the recruiting teams to stimulate applications of physicians for commissions.

One thing in the report of the Committee on the Study of Problems of Motor Vehicle Accidents interested me particularly. Much space in this report was given to a discussion of the alcohol blood tests for motor vehicle drivers which received a 100 per cent indorsement by the committee.

A resolution approving the principle of medical service plans on a service basis sponsored by state medical associations was adopted after prolonged discussion, as was also a resolution approving the activities of the National Physicians Committee. The women physicians of the United States failed to gain the support of the House in an effort to obtain commissions in the Medical Reserve Corps.

Resolutions on hospital corporations engaging in practice of medicine were adopted as follows: "*Resolved*, That the House of Delegates reaffirms the principles enunciated in official resolutions over a period of many years opposing the practice of medicine by corporations or the interjection of a third party into the personal relationship and financial transaction between doctors and patients; and be it further *Resolved*, That hospital corporations should not be permitted to engage in the practice of medicine through the medium of employed physicians or to enter into contracts with any individual, group or agency whereby the hospital agrees to furnish any medical services; and be it further *Resolved*, That, to the end that hospitals be discouraged from offering the services of licensed physicians to patients on a contract or service basis, all fees for medical services rendered in hospitals should be collected by or on the account of the physician rendering such service, and all physicians concerned in the care of

a patient should give or send directly to the patient or other responsible party a statement showing charges for professional services rendered; provided, however, that an exception to the foregoing principle may be made in the case of a formally organized partnership of physicians which acts in the capacity of an individual; and be it further *Resolved*, That the definitions of medical service and hospital service as applied to the principles stated herein shall be consistent with those applied in previous declarations of the House of Delegates in which medical services are construed as the services rendered by licensed practitioners of medicine, and hospital service as limited to hospital accommodations such as bed, operation room, medicines, surgical dressings and general nursing care; and be it further *Resolved*, That the Board of Trustees be urged to proceed to the clarification of these problems as requested by the House of Delegates at its last annual session."

Indicative of what we may expect following the war was a resolution by Dr. Hein of Ohio praising the work of refresher courses and pledging the Association and its Council on Medical Education and Hospitals to support a program of refresher courses for medical officers following their active service and before their final discharge from the Army. This resolution was passed.

The election of James E. Paullin as President-elect assures the Association of wise and conservative leadership. It was an excellent choice.

The impression brought back from this 1942 House of Delegates may be summarized in a few words. The House of Delegates was very responsive to the suggestions of the government in carrying on the Procurement and Assignment Service under the able leadership of Dr. Lahey. War effort dwarfed other problems in medicine but it was very evident the delegates were determined that scientific medicine in all its phases should remain on its present high plane and that there should be no let-down in the standards which medical education has attained. (Note: Before this report is published changes in medical education may be in effect.) For the above reasons, fewer resolutions than usual were introduced and few, if any, new policies were established. If there are any lessons to be learned by your delegates and brought back to this House, the most important is this: we do not give sufficient time nor discussion in our House of Delegates to the consideration of the ever increasing number of important economic problems.

R. D. Bernard

Reports of Standing Committees

REPORT OF THE COMMITTEE ON CONSTITUTION AND BY-LAWS

The Committee on Constitution and By-Laws brings up for its second reading the amendment concerning life members to the State Society. The amendment had its first reading last year, and the vote taken at this time, if affirmative, will make this rule a part of the Constitution. It reads as follows:

Article IV, Sec. 2, of the constitution is hereby repealed and in its place the following rule shall be enacted:

"Sec. 2. Any member of the Society who has practiced medicine for fifty years and has been a member of the Society for thirty years, or any other member of the Society who is incapacitated to such an extent that the payment of dues would work a hardship upon him, may, by affirmative vote of his county medical society, be presented as an applicant for life membership in the State Society. The House of Delegates of the State Society shall be the official body to pass upon such application, and a two-thirds vote shall be necessary for the conferring of life membership."

Your Committee asks the passage of this amendment.

John H. Henkin, Chairman
Bush Houston
William L. Alcorn

REPORT OF THE COMMITTEE ON FINANCE

The Committee on Finance of the Iowa State Medical Society met in the central office February 9, 1943, and examined the books of the State Society and found them to be in order. The audit as prepared by W. Widdup and Company was checked against the orders and checks and was found to be correct in all details.

The chairman of the Committee was authorized by the other members to serve alone in auditing the accounts of the Legislative Committee. This was done shortly after the annual meeting and the chairman reports that everything was in order.

The Committee still believes that the policy of waiving dues for men in service is correct, and feels that this should be done even if it means drawing upon the surplus of the Society.

Ernest C. McClure, Chairman
Arthur S. Bowers

REPORT OF THE COMMITTEE ON NECROLOGY

Will the House of Delegates please stand for a moment in memoriam while I read the names of forty-seven of our colleagues whom we lost by death last year?

Name	Town	Age
Anderson, Albert A.	Los Angeles	84
Barnes, Elbert M.	Gilman	67
Bemis, George A.	Garner	58
Bickley, William H.	Waterloo	65
Bower, Edward L.	Guthrie Center	77
Brannon, Patrick J.	Denison	66
Burk, Frank O.	Davenport	67
Butler, Ralph A.	Clinton	56
Campbell, Cassius L.	Atlantic	85
Childs, Ratford F.	Audubon	68
Clarke, James F.	Fairfield	78
Coddington, James K.	Humboldt	70

Davisson, Robert R.	Winterset	76
Donnelly, William L.	Davenport	49
Fink, Anthony L.	Carroll	60
Fisher, William C.	Williamson	71
Frantz, Charles P.	Burlington	71
Gifford, Albert K.	Cedar Rapids	66
Haygood, Marvin F.	Des Moines	57
Hibbe, Henry B.	Dubuque	50
Hibbs, Fred V.	Carroll	66
Hurd, Charles A.	Northwood	81
Jenkinson, Ernest A.	Sioux City	71
Jones, Jesse I.	Manchester	49
Jones, Mark C.	Boone	70
Kennedy, Edward M.	New Hampton	36
Kessler, John B.	Cedar Rapids	91
Lashbrook, Elam E.	Estherville	60
Lessenger, William S.	Mount Pleasant	74
Lowder, William	Maquoketa	76
Marston, Charles L.	Mason City	72
Mason, Harry P.	Wilton Junction	67
Maxwell, George B.	Davenport	78
Melrose, Maurice C.	Independence	48
Parker, William W.	Floris	69
Peck, John H.	Oakdale	63
Peoples, Horace R.	Burlington	46
Peters, Fletcher E.	Defiance	61
Ryan, Charles J.	Des Moines	69
Scott, Homer W.	Fort Dodge	49
Sebern, Richard C.	Fort Dodge	60
Sibley, Samuel E.	Sioux City	72
Southwick, William W.	Marshalltown	57
Spilman, Smith A.	Ottumwa	89
Van Ausdall, Garrett M.	New London	83
Webb, Harold H.	Ottumwa	52
Wiles, Edward W.	Des Moines	54
Wolfe, Channing E.	Coon Rapids	64
Wyatt, Orren W.	Manning	62

James G. Macrae, Secretary of the Council

REPORT OF THE PUBLICATION COMMITTEE

The Publication Committee feels the Journal has had another successful year. Its appearance was greatly enhanced beginning with the January issue when the style of the cover was changed and color added. Several favorable comments were received concerning this transition, and it is hoped the entire membership approves the new attire.

Every effort has been made to maintain the previous high standards in quality and quantity of scientific articles accepted for publication, and we feel this was accomplished in 1942. With so many of our members in military service and the subsequent reduction in material received, however, it may become necessary in 1943 to carry fewer articles in each issue. Mention should be made of the Roster of Iowa Physicians in Military Service which is carried in each issue of the Journal and which gives the location and rank of our members in service. This was compiled after many of our members entered the service, and from reports received from various physicians here and overseas it is felt that it is of considerable interest to everyone and is definitely a worthwhile addition to the Journal.

Another problem which has arisen because of the war is that of correct mailing addresses. Each month numerous changes are received and many Journals are returned, due to incorrect or insufficient addresses. May we appeal to each delegate to ask his county society secretary to keep the central office informed of the changes in location and rank of the men in service from his particular county? This would indeed be a great help in assuring the prompt delivery of the Journals to the men in service.

The figures in the accompanying table show the comparative cost of the Journal during the last three years.

It will be noted that the net expenditure per member has increased steadily during this period. The total Journal expenditure and the total Journal income also have risen each year, but with an increase in the number of State Society members the expenditure per member has remained substantially the same. The decided increase in these figures for 1942 was occasioned by rising costs, as well as by the addition of color to the Journal cover and several of the advertisements. The Committee is deeply grateful to the Cooperative Medical Advertising Bureau of Chicago, which is an official body of the American Medical Association, for its splendid efforts in behalf of the state journals. Most of the advertising contracts are secured by this Bureau, and their continuation is dependent upon the response received from the individual physicians in Iowa. A few requests for free samples or literature offered may mean the difference between the cancellation or renewal of an advertisement. Again may we call on each delegate by asking that he bring this matter to the attention of his county society members and ask their cooperation in patronizing the firms who advertise in our Journal?

	1940	1941	1942
Reading Pages	626	618	588
Advertising Pages	318	318	328
Percentage of Reading Pages	66.3%	66.0%	64.2%
Original Articles	101	87	89
Editorials	58	59	68
Total Journal Expenditures	$11,564.09	$11,868.94	$12,824.17
Total Journal Income	$ 7,723.65	$ 7,926.35	$ 8,786.50
Net Expenditure for Journal	$ 3,840.44	$ 3,942.59	$ 4,037.67
No. of State Society Members	2,475	2,478	2,490
Net Expenditure per Member	$ 1.55	$ 1.59	$ 1.62

Lee Forrest Hill, Editor

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION

Your Committee on Public Policy and Legislation has had an exceedingly active year.

Iowa Interprofessional Association. Although you hear little concerning the Iowa Interprofessional Association, the relationships established through this organization have been the means of an almost constant interchange of ideas and problems. Procurement and Assignment Service has definitely placed three of the member organizations in one group. The nurses have been much alive to this mutual interest and have shown a fine spirit of cooperation. Under the leadership of Miss Stella S. Scott as president and Dr. J. A. Barger as secretary,

we are assured of an active yet conservative leadership during 1943. There has never been, since the organization of the interprofessional group, a better demonstration of results accomplished by the unity of these groups than that shown when immediate action was needed upon the proposal that legislation be enacted to lower reciprocal standards of licensure. The legislative groups acted as a unit in opposition to this proposal. Federal legislation sponsored by the pharmacists to establish a separate pharmacists' corps in the armed forces did not receive our enthusiastic support. However, we did discuss this legislation with the Iowa congressional delegation as well as the Bureau of Public Policy and Legislation of the American Medical Association, suggesting changes in the present unfortunate position in which a pharmacist finds himself when entering the armed forces.

Medical Service Plans. For the past three and a half years Dr. Ernest E. Shaw, Chairman of the Medical Economics Committee, and the chairman of the Legislative Committee conducted extensive studies of the various medical service plans now in operation under the supervision of state and county societies. The 1942 House of Delegates authorized the appointment of a committee to continue this study and report at a later date. This committee was appointed, held one meeting, and ceased to function. Dr. M. C. Hennessy, at a meeting of the Executive Council held October 9, 1942, expressed the wish that the committee continue its work. Your Legislative Committee agrees with the thought expressed by Dr. Hennessy and respectfully suggests that a committee continue this study, that it report at the next meeting of this House, and further, that the material collected by this committee be filed with the secretary of the State Society for future reference.

Licensure. In the preceding paragraph mention was made of an effort to draft legislation to authorize and provide for the temporary admission to practice in this state of physicians and dentists to protect the health of the civilian population during the war emergency period. This was brought to our attention in December at a special meeting of the State Procurement and Assignment Committee. This proposal merited careful consideration and without doubt would solve many problems in licensure from a national standpoint. Your Committee decided that the proposal involved many radical and impractical changes, that in Iowa at least the civilian population was receiving and would continue to receive adequate medical care, and that it very definitely opened the doors to the refugee physician. Since this action was taken we have found that our opinion coincided with that of the majority of the states.

National Physicians Committee. The report of the secretary will, without doubt, mention the National Physicians Committee. This Committee has become a very distressing factor in American medicine. At the request of your Legislative Committee the Executive Council sent a special committee (Dr. J. E. Reeder, Dr. J. A. Downing, and Dr. R. D. Bernard) to Chicago to interview the officers of the National Physicians Committee and arrange a working plan for both organizations. This was necessitated by the fact that the National Physicians Committee had attempted to set up in Iowa a complete state, district, and county organization of its own. Mr. Pratt of the National Physicians Committee accepted the plan suggested by the Iowa committee and we are now operating under this agreement. Under this plan the state Legislative Committee has set up a separate NPC State Committee, with Dr. Fred Sternagel as chairman, to handle all of its literature, receive contributions, and contact our congressional delegation. This Iowa plan has received much favorable comment.

The North Central Medical Conference. The old Northwest Conference which included the states of North and South Dakota, Nebraska, Minnesota, Wisconsin and Iowa originated about fifteen years ago and met once each year to discuss legislative and economic problems of interest to these states. The meetings were informal, friendly, and neighborly. We profited immensely by these discussions. However, the Conference grew and expanded rapidly into the National Conference on Medical Service, meeting annually in February in Chicago. Last November representatives of the same states reorganized the old Northwest Conference into the North Central Medical Conference. The meetings are to be held annually in St. Paul and topics of mutual interest are to be discussed. For instance, at the November meeting we found there was no physician shortage in these six states; we agreed to fight the admission of refugee physicians, and did not favor lowering the bars of licensure; we did not approve of the legislative setup of the American Medical Association, and went so far as to express our ideas in a resolution presented at the National Conference on Medical Service February 14.

National Legislation. The highlights of 1942 are as follows: 1. Senator Gillette ceased to be an active supporter of the medical profession. This Committee did give him the benefit of the doubt until he introduced his famous bill in the Seventy-eighth Congress. 2. The Seventy-seventh Congress authorized the Surgeon General of the Army to appoint osteopaths as internes in army hospitals; it also provided money to pay commissioned medical officers who are graduates of reputable osteopathic schools. 3. The United States Supreme Court affirmed the decision of the Court of Appeals which found the American Medical Association guilty of the restraint of trade.

The Seventy-eighth Congress is flooded with bills antagonistic to the medical profession and the new social security plans of the administration will, without doubt, suggest sweeping changes in medical practice. There is a bare possibility they may be so radical that their mere suggestion will automatically bring about their defeat. This Committee feels that the Bureau of Legal Medicine and Legislation under the direction of Mr. J. W. Holloway is doing an ex-

cellent job but is convinced that the American Medical Association should immediately initiate a new legislative policy either under the direction of this bureau or through some other agency.

State Legislation. The various state legislatures now in session have more than the usual number of bills affecting the medical profession. They range from compulsory health insurance in California to premarital laws in Missouri and Idaho. The chiropractic, naturopathic, and physiotherapy groups are, as usual, demanding new state boards, new rights, and what have you.

Early last fall we requested all groups to send in new legislation to be presented at the present session of the legislature. We received none. Before the session convened we were informed that any controversial legislation would be frowned upon by the administrative leaders. Your Legislative Committee has not introduced any legislation at this session. However, it has been exceedingly active in checking the many measures introduced which affect the medical profession of this state. None of these measures, however, has been definitely acted upon by the legislature and adverse measures, for the present at least, are under control. A supplementary report from the floor will be made covering the results of the present session.

Cooperation of the members of the State Society has reached a new high and your Committee appreciates this expression of confidence.

R. D. Bernard, Chairman
L. A. Coffin
A. L. Jenks, Jr.

Reports of Special Committees

REPORT OF THE HISTORICAL COMMITTEE

During the past year this committee has published current information regarding Iowa physicians in practice and in military service that will be of historical interest for the future. The committee has also continued the publication of medical history as it applies to the individual counties in the state. It is desired at this time to express appreciation to those Iowa physicians who have contributed so liberally of their time in collecting these county medical histories.

Walter L. Bierring, Chairman
Frank M. Fuller
John T. McClintock
Paul E. Gardner
Henry G. Langworthy, Secretary

COMMITTEE ON MATERNAL AND CHILD HEALTH

The Committee on Maternal and Child Health held only one meeting during 1942, but conducted a great deal of business by correspondence following that conference. At the June meeting a program of care to the families of servicemen was discussed. The sum of $10,000 had been made available to Iowa by the Children's Bureau under definite rules and regulations, and at this meeting it was decided to allocate $100 to each county for obstetric and pediatric care of the families of servicemen. The plan as proposed was not acceptable to the Children's Bureau, and after much correspondence, it was decided to center the work in the University Hospitals at Iowa City, and to make obstetric care in special wards available to eligible mothers whose expected baby's father is in the military service of the United States. This program was announced in the February, 1943, issue of the Journal of the Iowa State Medical Society.

The committee again cooperated with the State Department of Health in conducting its fourth annual immunization campaign against diphtheria and smallpox. The week set aside for this was that of November 9-16, but many societies did not confine their work to that week alone, but held the campaign during November and December. During this program material was supplied to immunize 32,805 persons against diphtheria and 28,308 against smallpox. Seventy-two counties and county medical societies took part in the campaign.

The committee believes that the immunization program should be continued and asks the House of Delegates for its approval to hold such a campaign in 1943.

Harold E. Farnsworth, Chairman

REPORT OF THE STATE MEDICAL LIBRARY COMMITTEE

The State Medical Library has endeavored during the past year to continue its prompt and efficient service not only to the Iowa doctors practicing here in the state but has rendered to those Iowa doctors in the armed forces whatever services were possible; such services included the sending of literature regularly, loaning of material on specific subjects and the preparation of bibliographies.

Pieces of literature loaned	12,857	
Pieces of literature consulted in library	9,822	
		22,679
Requests for literature	3,489	
Patrons served in the library	2,134	
		5,623
Bibliographies prepared		16
Letters written	2,002	
Postal cards written	2,421	
		4,423
Telephone calls		931
Accessioned volumes in library		27,266
Periodicals received by paid subscription	184	
Periodicals received by gift subscription	82	
		266
Reprints		32,131

Gifts to the library:		
Books	1,469	
Journals	19,637	
Bulletins	1,274	
Reprints	863	
Transactions	104	
Reports	14	
		23,361
Gifts made to other libraries:		
Journals	2,541	
Books	319	
Bulletins	223	
Reprints	681	
Transactions, Reports and Proceedings	53	
Indices	2	
		3,819
Borrowed from Surgeon General's Library for doctors		33
Borrowed from other libraries for doctors		73

Jeannette Dean-Throckmorton, Medical Librarian

COMMITTEE ON PROCUREMENT AND ASSIGNMENT

Since our last report to the House of Delegates of the Iowa State Medical Society, the medical situation of Iowa has been considerably altered. As of April 1943, 645 physicians have entered the service of our armed forces.

We have begun to live, not according to our likes or dislikes, but according to standards set up by our government. We are gradually being rationed in every commodity. Medical service may, to a certain extent, be classed as a commodity. True, there is no official rationing of medical service; however, for all practical purposes the civilian population is being rationed voluntarily in its medical service. I believe it can be readily said and confirmed that the civilian population is cooperating in making the burden of the physician as light as possible. We may be thankful that no widespread epidemic has, so far, spread itself over the land.

During the months from January 1, 1942, to June 1, 1942, physicians were certified directly to the Procurement and Assignment Service at Washington. However, enlistment of physicians on a purely voluntary basis did not provide a sufficient number for the armed forces and so in cooperation with the Procurement and Assignment Service, War Department, Navy Department, Surgeon General's office, Selective Service, and War Manpower Commission, recruiting boards were sent to each state and a very active program of recruitment of physicians and dentists was inaugurated. The Iowa Board discontinued activity about November 1, 1942. We were assigned a quota of 324 physicians for the last eight months of the year. The last figures show that we had provided 127 per cent of our quota by December 1, 1942.

When it came time to assign 1943 quotas, we were given credit for the 27 per cent and as a result our quota for 1943 was set at 104, spread out over ten months of the year. However, all enlistments during December were credited against this number, so that on January 1, 1943, we were faced with supplying actually less than 100 doctors.

In November, we requested certain information from the county chairmen to enable us to reclassify the physicians on a basis of their need to the community and also on a basis of family responsibility. I am sorry to report that the following counties failed to respond: Boone, Buena Vista, Des Moines, Fayette and Greene.

On December 20, 1942, a meeting of the state chairmen of all states in the Seventh Service Command was held at Omaha and we were informed that a new survey was to be made and that we would be provided with certain forms to be made out in duplicate for each physician, one copy to be retained by the county and one by the state chairman. From the information on these forms it will be possible to classify a man on the same basis as used by Selective Service.

It was realized that recruiting boards, such as were used in 1942, were far from being desirable. The present program calls for the state chairman to serve as a quasi recruiting officer for his profession. He will furnish Procurement and Assignment Service with a certain number of names of available physicians each month and these physicians will receive all instructions from the Service. Each physician so certified to Washington will receive a letter asking him to apply for a commission, designating his choice of service on an enclosed card which he will mail to the state chairman. Availability clearance forms will then be sent by the state chairman to the office of Officer Procurement in Washington and it will then forward forms to the physician. If there is no response from the physician within two weeks, the state chairman is to follow up the case. We must furnish about ten physicians per month for ten months.

The big problem today, not only in Iowa but in practically every state in the Union, is the task of relocating physicians. In Iowa there are still well over 200 physicians under 37 years of age. Some are classed as essential because they represent the only medical service available to the community; some are physically disqualified for service; others are internes and essential residents; and some are apathetic toward our war needs. The main weakness of Procurement and Assignment Service is the fact that it lacks authority. It is purely a consultant service, set up with fine ideals of patriotism and professional pride as a background. These ideals are truly laudable and are definitely exhibited by every physician who is in service today. However, the almighty dollar sign has been set up as the true symbol of patriotism by a small group of our profession, especially among the young men who have tasted the benefits of city practice. We have often asked the question: "How shall we proceed to get the young physically disqualified physician to take over for the man who either wants to go into service, or who should go?" We invariably receive the same answer: "You should appeal to his sense of duty to his country and to humanity." Were we to attempt this, there would be no time remaining for our own attempts to make a living, let alone carry on the functions and

duties pertaining to the office of Procurement and Assignment. Our reluctant physicians should bear in mind the indelible fact that our boys manning the guns, planes, ships, and tanks have no choice; they go or else. We often receive protests from physicians that they have a family dependent upon them for subsistence. Every commissioned officer has an adequate dependents' allowance that will permit his family to live in moderate comfort. Naturally, numerous luxuries will have to be eliminated.

We have from time to time received numerous letters and petitions protesting against the classification of certain physicians as being available. Upon investigation we found many of these were inspired by the physician concerned.

Another problem confronting the Procurement and Assignment Service, and one over which we have absolutely no control, is that of physicians, not necessarily in the 45 years of age or under group, who move from small towns to larger communities. To those who have consulted us, we have replied that although we do not have authority to prevent their going, we certainly do not approve of it. There have been four or five instances where men have gone to other states and used Procurement and Assignment as an excuse for so doing. We have investigated each case and have in every instance branded such allegations as a lie.

We are pleased to report that our office has been of assistance in relocating physicians in three or four instances, thus releasing men for service. We sincerely hope if the call for physicians continues, as it will if the war is prolonged, that we will have the continued cooperation and good will of the profession of the state of Iowa.

In closing this report, I wish to express my appreciation to the officers and office employees of the Iowa State Medical Society, the officers and committee chairmen of the constituent county medical societies, and to that superb group, the district chairmen, for their help, advice, cooperation and frank opinions. Let me assure every member of the medical profession in Iowa that we have endeavored to conduct the office of State Consultant of the War Manpower Commission for Procurement and Assignment Service on a fair and just basis, with absolutely no partiality or antagonism toward any individual or group.

Thomas F. Suchomel, Chairman
Arthur W. Erskine
Frank P. Winkler
Robert L. Parker

REPORT OF COMMITTEE ON PUBLIC RELATIONS

During the past year most of the activities of the committee were confined to the importance of stressing to the lay public the present and increasing shortage of medical personnel in the state. Through the medium of public appearances, newspaper releases and radio talks, your Committee has tried faithfully to persuade the people as a whole to confine their ordinary medical services to office calls. In doing this we have endeavored not to encourage the ordinary patient to try home remedies for illnesses that obviously need medical attention.

Your committee feels that the health of the people at home must be safeguarded now more than ever before because if it is not good, nothing beyond the home front can be as it should be.

H. E. Stroy, Chairman

REPORT OF THE COMMITTEE ON SCIENTIFIC EXHIBITS

Ten scientific exhibits were prepared for the 1942 annual meeting, all of them of high quality. For several years the Iowa Pharmaceutical Association has participated in this section of our meeting, and in 1942 the Iowa Veterinary Medical Association also brought an exhibit. We welcome our allied professions to this participation and appreciate the informative exhibits they bring us.

For the past few years your Committee on Scientific Exhibits has endeavored to increase the quality of this section of the meeting by doing its best to provide a good background. The exhibitors have taken care of the quality of their own displays without urging from us. We feel that this section has become more important every year, attracting more and more visitors, and we trust the war will not make it necessary to dispense with this feature of the meeting.

Lewis M. Overton, Chairman
Richard F. Birge
Wallace H. Longworth

REPORT OF THE WOMAN'S AUXILIARY ADVISORY COMMITTEE

As chairman of the Advisory Committee I submit the following report:

The Woman's Auxiliary to the Iowa State Medical Society has presented a progressive program this past year in spite of the handicaps brought on because of the war. Through its Public Relations and Legislative Committees it has been very active in sponsoring a bill in the legislature for compulsory vaccination against smallpox. Members have been informed concerning the value and need of vaccination and how effective it has proved to be in states where it has been practiced year after year.

Defense work such as knitting, sewing, and making bandages, has had its place in the Auxiliary work. The study of nutrition which had a large place in last year's program has been continued. Many members have been taking up first aid, nurse's aide, Red Cross or professional nursing as well as home nursing. Where such activities exist in our communities, relief of strain on the doctors has resulted. Should epidemics hit our communities, resources to care for the sick might be taxed to the limit. A student loan fund to assist nurses in training who need financial aid is still being sponsored. Members are buying War Bonds and Stamps.

Health programs and projects in Iowa communities have been planned by physicians' wives. These

have been presented in conjunction with Federated Women's Clubs, Farm Bureau and Parent-Teacher organizations. Material for study of mental health, child welfare and cancer have been distributed to auxiliary and to other groups. Dr. Morris Fishbein, editor of the Journal of American Medical Association, has declared, "Doctors' wives must guard the nation's health in emergency." In Iowa the Auxiliary is living up to this slogan. Its program for the year has been "The Doctor's Wife in War Time." The Auxiliary is keeping the fires burning on the home front and is exhibiting a morale that is unshakeable.

James C. Hill, Chairman

Reports of Committees of the Council

REPORT OF THE EXECUTIVE CANCER COMMITTEE

The Executive Cancer Committee of the Iowa State Medical Society met in Iowa City in September, 1942, and in January, 1943. There was also present at these meetings the Executive Board of the Iowa Division of the Women's Field Army of the American Society for the Control of Cancer. Attending the January meeting were Mrs. Illig of the New York office and Mrs. Long, State Commander of Missouri.

The following are the minutes of the meetings by Arthur W. Erskine, M.D., secretary:

The report of the September meeting follows: The question as to whether the members of the Executive Board of the Iowa Division of the WFA should sever relationship with the national organization was discussed at great length, and the various advantages and disadvantages of such a course were brought out.

On motion, regularly seconded and passed, the Executive Cancer Committee of the Iowa State Medical Society recommended that the members of the Executive Board of the Iowa Division of the WFA continue to maintain their relationship with the national organization, and also recommended that the Executive Board should continue such relationship on approximately such terms as were stipulated a year ago.

There was a general discussion about the impossibility of making an intensive, aggressive campaign for contributions next year, and it was agreed by all present that, for the duration of the war, solicitation of funds should be, in large part, abandoned; and that the efforts of the Iowa Division of the WFA should be directed toward publication of the bulletin, the distribution of posters, exhibits, etc., the publication of the laymen's manual, and the maintenance and completion of a skeleton organization, especially as such an organization can be advanced by the efforts of the Cancer Committee of the Iowa State Medical Society.

The report of the January meeting follows: There was a lengthy discussion of the decision of the Iowa Division to discontinue its aggressive campaign for contributions to the WFA for the duration of the war. It became apparent early in the discussion that neither Mrs. Illig nor Mrs. Long was familiar with the problems of the Cancer Committee and the Iowa Board of the WFA. Dr. Hill and Dr. Morgan explained in some detail the separate functions of the Speakers Bureau, the Department of Cancer of the State Department of Health, and the Tumor Clinics, and pointed out how all these organizations cooperate with the WFA and assist the Iowa Division in carrying out its work and plans for education in cancer.

Dr. Plass mentioned some of the difficulties that would attend an aggressive campaign for contributions this year, among them being the restrictions of travel, the great distances in Iowa, and the shortage of qualified medical speakers.

During the conversation Mrs. Illig discussed the national program of:

A. Lay education in cancer, especially the early signs of cancer and the desirability of periodic examinations.

B. Medical aid, such as assistance in tumor clinics, transportation, etc., and services such as modified nurse's aide work.

C. Preparation of surgical dressings, when needed, by indigent cancer patients. She said that many women want to work with their hands.

Mrs. Illig and Mrs. Long both spoke of the function of the district schools of instruction for officers of the Women's Field Army. Mrs. Long said that the Women's Field Army intends to do more than conduct a campaign for contributions, and has a definite program of training women for education work in cancer. Mrs. Illig several times emphasized the need for education in cancer control even in war time. Both Mrs. Illig and Mrs. Long explained that the function of the directors is organization, not education.

After lunch Mrs. Illig talked about the advantages of incorporating the Iowa Division of the Women's Field Army as a state division of the American Society for the Control of Cancer. She mentioned among such advantages:

A. A corporation is more nearly permanent.

B. More financial support is available. She said there are various types of dues, and although 30 per cent of the $1.00 membership dues is sent to the national organization, the $5.00 sustaining dues all stay and are used in the state.

C. The corporation provides greater protection in handling public funds.

The controversy between the Iowa Board and the national organization in regard to the division of funds was not discussed. The correspondence be-

tween Dr. Little and Dr. Plass, and Dr. Little and Dr. Morgan was mentioned several times, but neither the correspondence nor Dr. Binkley's report was discussed in detail.

Mrs. Illig said that although she and the national officers are anxious to have the Iowa Division continue its aggressive campaign for contributions and its program of education, the scope of the Iowa activities must be decided by the Iowa Executive Board, and the national organization will, of necessity, agree to whatever activities are decided upon by the controlling board of the Iowa Division.

It was agreed by the members of the Executive Cancer Committee of the Iowa State Medical Society and the Executive Board of the Iowa Division of the Women's Field Army that a meeting of the entire Cancer Committee should be held at an early date.

We are much pleased with the excellent work done in cancer education by the Iowa State Department of Health. The cooperation of Dr. Bierring and Dr. Zimmerer is appreciated. The various pamphlets and talks published by the Board have great educational value in the war against this dread disease.

James C. Hill, Chairman

REPORT OF THE COMMITTEE ON INDUSTRIAL HEALTH

The Committee on Industrial Health of the Iowa State Medical Society has been concerned during the past year with coordinating the activities of the Division of Industrial Hygiene of the State Department of Health with the county medical societies of the state, particularly in the larger industrial areas.

The staff of the Division of Industrial Hygiene has been enlarged by adding a medical director, Robert V. Holman, M.D., Assistant Surgeon of the Untied States Public Health Service. Other members of the staff are Paul J. Houser, M.S., Industrial Hygiene Engineer, and N. C. Burbank, Jr., M.S., Industrial Hygiene Chemist. With a fully equipped laboratory the division is able to carry on all forms of industrial hygiene investigations.

The particular problem in Iowa is connected with advising small industrial plants in regard to developing a modern industrial health program.

The Council on Industrial Health of the American Medical Association and the Subcommittee on Industrial Health and Medicine of the Office of Defense, Health, and Welfare Service, Clarence D. Selby, M.D., Chairman, have directed attention to the special needs of small plants under the following three headings:

1. Establishment of a means for public information about the benefits of industrial health service.
2. Improved industrial medical education, both before and after graduation.
3. Improved committee organization in the state and county medical associations for aggressive leadership in all aspects of industrial health service.

With the approval of the Committee on Industrial Health the Division of Industrial Hygiene has developed a five-point program covering treatment of injuries, physical examinations, appraisal and control of the working environment, records of absenteeism, and health education, which when carried out by an industry constitutes an adequate industrial health program. The publication "A Five Point Industrial Health Program," published as Iowa Public Health Bulletin No. 42-1, is a complete discussion of this program and was sent to the members of industrial health committees, county medical societies, and to industries in those counties where the program was approved by the medical society committee.

Since the field of industrial physicians in the state is composed, for a large part, of private practitioners and since this program advocates the devotion of additional time by the physician to industrial practice, it was thought inadvisable to send the publication to industrial managers without first gaining the approval of the medical profession. To date the program has been approved in ten of the twenty-five counties where industrial health committees have been appointed. It has been introduced by mail in the remaining fifteen counties but has not been discussed in all of them since some are not heavily industrialized and it has not been convenient to make the necessary contacts by personal visit. Five of the committees in heavily industrialized counties where personal contacts were made have not yet approved the program but this does not necessarily indicate that they disapprove since, in some cases, the press of other duties has prevented proper attention to the issue.

This division makes available to industry all of the other divisions of the State Department of Health. Thus, in industries where there are physical examinations or where they are contemplated, microfilming of the chests is available. Microfilming of the chests has been done in four plants employing a total of 892 workers and is being done in a fifth plant where already 2,807 workers have been surveyed. Also, the services of the State Hygienic Laboratory are available to industry for the examination of blood samples for indications of syphilis.

The Committee on Industrial Health in January, 1943, distributed to all licensed physicians a circular of information regarding epidemic kerato-conjunctivitis, its prevalence in certain industrial areas, the principal clinical symptoms, the treatment, and importance of reporting. Epidemic kerato-conjuctivitis by reason of its rather long course of infectivity has been a prominent cause of absenteeism in industrial workers in areas where it has been epidemic.

The members of the Division of Industrial Hygiene investigate all incidences of occupational disease and also all deaths which are reported due to the occupation in an attempt to prevent their further occurrence.

It is reasonable to expect that during the coming year a still closer cooperation will be accomplished between all agencies interested in the promotion of better industrial health in Iowa.

James E. Reeder, Chairman
C. H. Cretzmeyer
J. G. Macrae

REPORT OF THE SPEAKERS BUREAU COMMITTEE

To the Members of the Council:

The activities of the Speakers Bureau have been conducted as usual during 1942 in spite of the many readjustments necessitated by prevailing conditions.

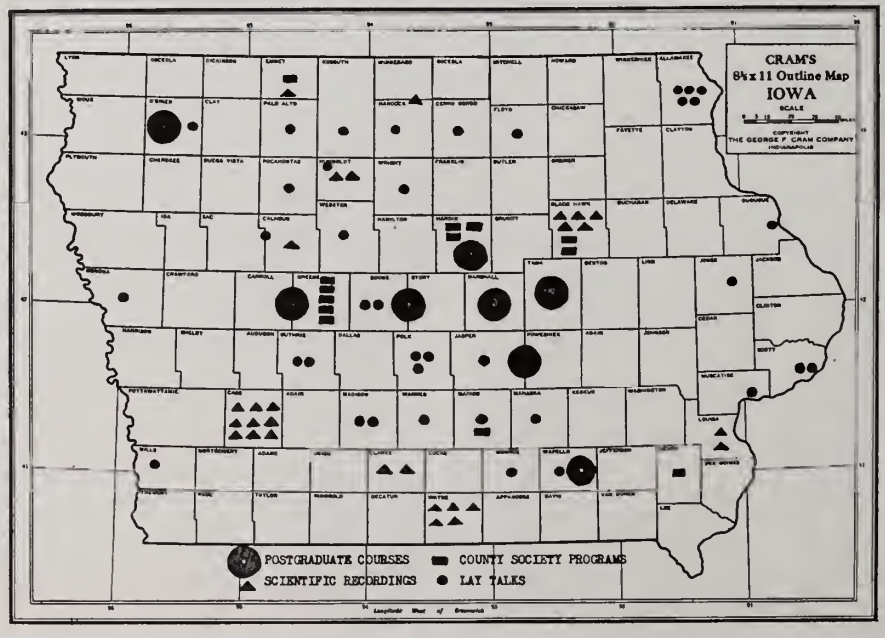
Eight medical postgraduate courses consisting of fifty-two lectures were arranged this year. Early in January the Marshall County Medical Society began a series of nine lectures which were attended by a large majority of the physicians in and around that county. Jasper and Poweshiek Counties were hosts to the members of that vicinity for a series of eight postgraduate lectures. The meetings were scheduled alternately at Grinnell and Newton. According to a report from the local chairman the meetings were excellent, but the attendance had decreased a great deal since the previous year. The Boone and Story County Medical Societies held one postgraduate meeting in Boone and one in Ames early this year. Following these programs the course was discontinued since the physicians felt the attendance was too limited to warrant additional meetings. In the spring of 1942 four postgraduate lectures were conducted before the doctors in the vicinity of Carroll and Greene Counties. Carroll and Jefferson were the meeting places for these programs. This course, however, was not resumed in the fall since many of the physicians were in military service, leaving an increased burden on the remaining practitioners. Beginning in the latter part of February the Tama County Medical Society was host to a series of five postgraduate lectures held in various towns of that county. The O'Brien County Medical Society held a spring postgraduate course of two meetings with two speakers at each meeting. In the fall this group in conjunction with other physicians in that district conducted the Northwest Iowa Postgraduate Medical Course. At this time six programs were presented in Sheldon, and active interest was shown by the attending doctors. The Hardin County Medical Society extended invitations to physicians of the sixth district to be present at a series of five postgraduate lectures. The meetings were conducted alternately at Eldora and Iowa Falls. Eight lectures comprised the program for the Wapello County Postgraduate Medical Course which was conducted this fall. The meetings were held in Ottumwa and many favorable comments were received about the speakers and the scientific material which they presented.

Although the number of physicians attending the postgraduate medical lectures was greatly decreased, we have had many gratifying reports about the courses from the local chairmen and members of the societies. In addition to the splendid addresses given by members of our State Society, prominent specialists from Chicago, Kansas City, Rochester, Omaha, Minneapolis, and St. Louis were included in our schedules. All of these physicians have contributed new and valuable knowledge to the general practitioners of our profession, and we deeply appreciate the cooperation and effort they have expended to make postgraduate medical education possible.

The Bureau has also made arrangements for thirty-three medical talks before various lay organizations. Seven of these addresses were presented before parent-teacher associations, fifteen before women's clubs, and eleven before men's service clubs.

Twelve county medical societies availed themselves of the Bureau's services to procure speakers for their meetings. Among these scientific programs were lectures by members of the State Society and one by a well-known Iowa dentist.

A total of thirty scientific recordings were mailed



out upon request to twenty-six county medical societies and four hospital staff meetings. We have arranged courses of recorded medical lectures before a number of the county medical societies, and they have proved particularly suitable for small medical organizations.

Each week a radio talk has been broadcast over stations WOI in Ames and WSUI in Iowa City. Excellent manuscripts for these talks have been prepared by physicians over the entire state, and upon request 1,388 copies of the talks have been mailed to our radio listeners. Organ music for our WOI broadcast has been continued for 1943, since we feel this feature enhances our program and increases the size of our radio audience. Spot announcements concerning smallpox have been used on our programs throughout the year. Since October our broadcasts also have included a short announcement about highway safety. Material for this has been furnished us by the Iowa Department of Public Safety.

The Committee is pleased to present the financial report of the Speakers Bureau for 1942, followed by the record of its financial standing since its origin.

Account for 1942

Income

Receipts from Postgraduate Medical Courses	$1,108.76
Total Speakers Bureau Income	$1,108.76

Expenditures

Salaries	$1,225.25
Travel Expense for Speakers	92.28
Postgraduate Course Travel Expense	850.46
Radio	583.99
Stationery, Printing, Telephone, etc.	188.94
Miscellaneous	7.35
Total Speakers Bureau Expenditures	$2,948.27
Deficit for 1942	1,839.51
Funds Received from Iowa State Medical Society to Offset Deficit	1,839.51

Account 1930 Through 1942

Year	Disbursements	Receipts	Deficit
1930	$ 306.26	$ 2,780.00	$ 2,473.74*
1931	3,949.97	3,939.34	10.63
1932	5,855.70	2,805.58	3,050.12
1933	3,744.06	3,650.70	93.36
1934	4,316.30	4,350.90	34.60*
1935	5,435.56	5,151.97	283.59
1936	4,360.13	3,431.03	929.10
1937	5,741.55	3,042.24	2,699.31
1938	5,493.99	3,806.42	1,687.57
1939	4,427.95	1,766.75	2,661.20
1940	4,376.53	3,384.31	992.22
1941	4,941.55	2,211.00	2,730.55
1942	2,948.27	1,108.76	1,839.51
Total	$55,447.82	$41,429.00	$14,468.82

(*) Balance instead of Deficit.

The figures for the 1942 activities which are included in this report are intended to show clearly and briefly the extent of the Bureau's work during the year. They cannot, however, depict the wholehearted cooperation and support of the physicians who have made this organization successful and worthwhile. To them the Committee is indeed grateful.

1942 SPEAKERS BUREAU ACTIVITIES

Number of Medical Talks arranged for Lay Groups	33
Number of County Medical Society Programs arranged	12
Number of Scientific Recordings sent out for Medical Meetings	30
Number of Radio Talks arranged	52
Number of Postgraduate Medical Lectures	52

Joseph B. Priestley, Chairman
Thomas F. Hersch
Walter R. Brock
Sydner D. Maiden
James Dunn

REPORT OF THE TUBERCULOSIS COMMITTEE

On behalf of the Tuberculosis Committee I wish to state that because of the feeling against conventions and public meetings which would necessitate travel, particularly since gas rationing has become so important, this Committee has felt that it would be better if we did not go through with our previous plans of having programs in different sections of our state. Through other means of communication we have done everything possible to continue to create enthusiasm and to give assistance to all agencies who are working toward the eradication of tuberculosis, and we have offered to supply speakers and to assist in building programs anywhere in the state where they were requested.

J. Carl Painter, Chairman

REPORT OF THE IOWA DIVISION, WOMEN'S FIELD ARMY

Since a detailed introduction of the duties of the State Commander of the Women's Field Army was published in the handbook for the House of Delegates last year, I shall be brief and say that the year 1942 was far from a successful year, due in some cases to increased war activities, and also to lack of interest on the part of doctors who served their counties as cancer chairmen or deputy chairmen.

The Iowa Cancer Bulletin, issued quarterly and mailed to all 1941-42 contributors, to all libraries in the state, to the 562 newspapers, and to every doctor in Iowa whether or not he contributed to the annual enlistment campaign, reaches approximately 9,000 people quarterly.

The 16 millimeter and 35 millimeter films "Choose to Live" were shown 78 times and the campaign trailer 127 times. Forty-seven radio programs were arranged as a part of the enlistment and the education campaign. One hundred and forty-two talks were given by physicians; six hundred and seventy by officers of the WFA.

Our Latex Cancer Models were displayed at 31 state and county meetings and again for one week at the Waterloo Cattle Congress. Attractive colored posters showing cancer deaths (all forms) were made for counties promoting cancer education, and after the April campaign were turned over to public health nurses for showing in court houses. Cancer

posters and literature were used in Red Cross Home Nursing classes. The booklet Handbook for Nurses was very popular.

A large map of the State of Iowa was designed and sent to Des Moines for use at the annual State Medical Society meeting and also the Woman's Auxiliary forum. The map showed county population, cancer deaths by counties, and counties promoting cancer education and affiliation with the WFA.

Since tire and gas rationing will prevent travel for lecture purposes, a health exhibit such as Dr. J. Clark Cooper of Villisca prepared and promoted would be of interest to school children and adults. The story of Dr. Cooper's exhibit was published in our July Cancer Bulletin.

The State Commander's travel was carefully planned because of the tire rationing. Often a taxi had to be engaged in order to reach meeting places on schedule. The following towns were visited: Cedar Rapids, Tama, Marshalltown, Fort Dodge, Charles City, Waterloo, Independence, Ames, Sidney, Red Oak, Villisca, Guthrie Center, Yale, Des Moines, and also the Public Health Conference at Waverly.

Dr. Edmund G. Zimmerer, Director of Cancer Control, Des Moines, spent several weeks lecturing to high school students, service clubs, and adult home nursing groups. These lectures were promoted by officers of the Women's Field Army. Leaves from a Lady's Diary, written by Dr. Zimmerer, and published in our October Bulletin, attracted the attention of many doctors. The WFA had several thousand leaflets of the story printed for distribution in doctors' offices. These leaflets will be wrapped in laundry packages in many counties this year as part of the educational program.

The State Commander attended three meetings of the State Cancer Committee and the Executive Board of the Women's Field Army.

1942 Analysis of Membership and Contributions

DISTRICT NO. 1

Mrs. Coburn Chapler, Charles City, District Commander
Dr. Leslie L. Carr, West Union, Councilor

County	Campaign Funds
Allamakee	$ 7.00
Bremer	42.00
Clayton	10.25
Floyd	32.20
Howard	3.20
Mitchell	72.34
Total	$ 166.99

Chickasaw, Fayette, and Winneshiek counties not organized.

DISTRICT NO. 2

Mrs. C. Frederick Beck, Mason City, District Commander
Dr. C. H. Cretzmeyer, Algona, Councilor

Butler	$ 55.75
Cerro Gordo	66.65
Hancock	13.00
Kossuth	27.20
Winnebago	53.40
**Worth	187.56
Total	$ 403.56

Franklin, Humboldt, Hancock, and Wright counties not organized.

DISTRICT NO. 3

Mrs. T. L. Ward, Arnolds Park, District Commander
Dr. James B. Knipe, Armstrong, Councilor

Clay	$ 15.60
Emmet	8.00
Lyon	74.13
O'Brien	53.35
**Osceola	127.26
Sioux	120.15
Total	$ 398.49

Dickinson, Palo Alto, and Pocahontas counties not organized.

DISTRICT NO. 4

Mrs. Geo. M. Pedersen, Storm Lake, District Commander
Dr. James E. Reeder, Sioux City, Councilor

Buena Vista	$ 142.70
Cherokee	33.60
Ida	1.60
Monona	23.90
Plymouth	58.20
Woodbury	444.49
Total	$ 704.49

Carroll, Crawford, and Sac counties not organized.

DISTRICT NO. 5

Mrs. Edward L. Bower, Guthrie Center, District Commander
Dr. E. F. Beeh, Fort Dodge, Councilor

Guthrie	$ 10.00

Boone, Calhoun, Dallas, Greene, Hamilton, Polk, Story, and Webster counties not organized.

DISTRICT NO. 6

Mrs. Wm. H. Aves, R.F.D., Marshalltown, District Commander
Dr. C. W. Ellyson, Waterloo, and Dr. James C. Hill, Newton, Councilors

Black Hawk	$ 7.00
Grundy	9.16
Marshall	97.25
Total	$ 113.41

Benton, Black Hawk, Hardin, Iowa, Jasper, Poweshiek, and Tama counties not organized.

DISTRICT NO. 7

Mrs. Lumir Severa, Cedar Rapids, District Commander
Dr. H. A. Householder, Winthrop, Councilor

Buchanan	$
Cedar	48.65
Dubuque	383.30
**Johnson	378.61
Jones	35.00
Linn	328.40
Total	$1,173.66

Buchanan, Clinton, Delaware, and Jackson counties not organized.

DISTRICT NO. 8

Mrs. H. C. Page, Farmington, District Commander
Dr. C. A. Boice, Washington, Councilor

Van Buren	$ 94.20
Henry	1.00
Washington	30.10
Total	$ 125.30

Des Moines, Henry, Jefferson, Lee, Louisa, Muscatine, and Scott counties not organized.

DISTRICT NO. 9

Mrs. B. A. Fuller, Centerville, District Commander
Dr. R. C. Gutch, Chariton, Councilor

Appanoose, Davis, Keokuk, Lucas, Mahaska, Marion, Monroe, Wayne, and Wapello counties not organized.

DISTRICT NO. 10

Mrs. I. W. Keen, Indianola, District Commander
Dr. James G. Macrae, Creston, Councilor

Adair	$ 2.00
Ringgold	9.00
Total	$ 11.00

Adair, Adams, Clarke, Decatur, Madison, Ringgold, Taylor, Union, and Warren counties not organized.

DISTRICT NO. 11

Dr. M. C. Hennessy, Council Bluffs, and Dr. Reu L. Barnett, Atlantic, Councilors

**Fremont	$ 171.25
Montgomery	69.95
Pottawattamie	12.00
Total	$ 253.20

Audubon, Cass, Harrison, Mills, Page, Pottawattamie, and Shelby counties not organized.

TOTAL ENLISTMENTS, CONTRIBUTIONS, MEMORIAL FUND AND SALE OF PARCEL POST LABELS AS OF JANUARY 1, 1943 ..... $3,360.10

**Denotes counties having exceeded their quota (one dollar for each one hundred population).

ANNUAL REPORT

Balance in Council Bluffs Savings Bank, January 1, 1942 $3,438.38

RECEIPTS

1942 Individual Enlistments	$ 983.00	
Contributed to Memorial Fund	1,020.00	
Contributions	861.90	
Sale of address labels	495.20	
District No. 2 expense money returned	19.25	
Total		$3,379.35
		$6,817.73

DISBURSEMENTS

30 per cent Enlistment fees for American Society	$ 294.90	
Bulletins	1,459.77	
Memorial Fund	1,020.00	
District Expense—Organization	582.26	
Pamphlets, circulars and printing	876.95	
Stenographic assistance	336.15	
Office supplies	106.15	
Telephone and telegrams	139.36	
Express and postage	186.34	
Exhibits	265.72	
Miscellaneous and audit	32.62	
Total		$5,300.22

Balance in Council Bluffs Savings Bank, January 1, 1943 $1,517.51

MEMORIAL FUND

1941	$ 711.50
1942	1,020.00
	$1,731.50

In conclusion may I say that I hope the time will soon come when every county will become interested in promoting cancer education. Until the unorganized counties cooperate with the WFA we cannot expect the handful of faithful counties who have supported the organization since its inception to provide the unorganized counties with literature, exhibit material and posters. The year 1943 can be a "BANNER YEAR" if every doctor in the state joins the WFA as a contributing member, encourages cancer education and includes the names of several service clubs and organizations within his county to be placed on the Bulletin mailing list.

Respectfully submitted,

Mrs. Arthur V. O'Brien, State Commander

The Speaker: The next order of business is the acceptance of supplemental reports. Has the Secretary a further report to make?

The Secretary: No further report.

The Speaker: Has the Treasurer a further report to make?

Treasurer Downing: No further report.

The Speaker: Board of Trustees?

Dr. Fay: No further report.

The Speaker: The Council?

Dr. Reeder: No further report.

The Speaker: Delegates to American Medical Association?

Dr. Bernard: No further report.

The Speaker: Committee on Constitution and By-Laws?

Dr. Henkin: No further report.

The Speaker: Finance Committee?

Dr. McClure: No additional report.

The Speaker: Medical Economics Committee? Dr. Shaw is in the service. Will someone speak for that committee? Medical Education and Hospitals? Medicolegal Committee? Now we come to the Necrology report, and I believe it would be fitting if Dr. Macrae, the Secretary of the Council, would come forward and read the list of deceased members, and all stand while he is reading this list.

The members arose and remained standing during the reading of the list of deceased members by Dr. Macrae.

The Speaker: Publications? Public Policy and Legislation?

Dr. Bernard: Mr. Speaker, the meeting would not be complete unless the Committee on Public Policy and Legislation had a report. We were fortunate in that no adverse legislation of a serious nature was introduced in the last legislature.

The osteopaths attempted to gain permission to practice in all but privately owned hospitals. This bill died in the Senate Sifting Committee.

S. F. 36—H. F. 111: Companion bills sponsored by the optometrists and approved by the Executive Council of the Iowa State Medical Society, as well as practically all of the ophthalmologists, died in the sifting committee of the House. Your Legislative Committee did not give this bill its active support. This was a repetition of an experience we have at every session; there is always some group in trouble who expects us to fight its battle.

S. F. 82: This bill on income tax deduction of medical and hospital expense conforms to the federal law. S. F. 108 permits life insurance companies to issue up to $5,000.00 without medical examination. Both bills became law.

S. F. 242—H. F. 423: Companion bills creating county boards of health failed to pass because of a late start. We trust this bill will be introduced at the next session.

S. F. 370: This bill, relating to exemption from medical examination for members of the armed services in order to eliminate the premarital examination, was not considered. Had this bill passed, it would have been an opening wedge for future amendments to our satisfactory premarital law.

Smallpox legislation was not attempted at this session. We felt there was no possible chance of passing such legislation. I *move* the acceptance of the supplementary report.

The motion was seconded and carried.

The Speaker: Next is the report of the Baldridge-Beye Memorial Committee.

The Secretary: I wish to present the following report from Dr. Willis M. Fowler, Chairman: "As Chairman of the Baldridge-Beye Memorial Prize Committee, I wish to report that in the committee's opinion the manuscript which was submitted for this competition was not of high enough caliber to warrant consideration for the prize. It is the committee's opinion that no prize should be awarded this year."

The Speaker: What do you wish to do with the report?

It was *moved* and *seconded* that the report be accepted; *the motion was carried.*

The Speaker: Fracture Committee? Is Dr. Bessmer here? (No response.) Historical Committee? Dr. Bierring is not here. Maternal and Child Health?

Dr. Farnsworth: Mr. Speaker, we have a supplemental report to make at this time. Our Committee on Maternal and Child Health has had a problem thrown into its lap. There has been a little adverse criticism of the recommendation we made early last year regarding the money which had been allocated for the care of infants and wives of men in service. The Children's Bureau told us what it wanted done with this money, but rejected our plan for doing it, and sent back further orders that we had to follow. We thought it best at that time to accept the $10,000.00 and take care of those wives in the maternity wards at the University Hospitals. If you divide the $10,000.00 throughout the counties in the state, their plan would allocate about $100.00 to each county.

On March 18, 1943, Congress passed and the President approved an act providing medical and hospital maternity and infant care for wives and infants of enlisted men of certain grades in the military service, the program to be administered by the Children's Bureau. The sum of $1,200,000 was appropriated for the remainder of the year, ending June 30, 1943. We have not accepted this and have no plans for setting up a program, and Iowa will not share in the money granted prior to June 30, 1943. We are only interested in the $6,000,000 which is to be appropriated for the fiscal year beginning July 1, 1943.

I shall not go into detail on this, but, in abstract, through the State Department of Health, any woman in the state, irrespective of legal residence, whose husband is an enlisted man—and this includes men deceased or missing in action—in the armed forces of the United States, in the fourth, fifth, sixth and seventh grades of the Army, Navy, Marines and Coast Guard, who may make application for such care will be eligible for the hospital and maternal medical service provided under the plan without cost to the family when similar service is not otherwise available from medical or hospital facilities in the Army or Navy or from facilities provided by or through official state or local health agencies. Also, any infant under one year of age, whose father is an enlisted man as previously described, will be eligible for pediatric or other medical, surgical, and hospital care as provided under the plan.

I shall not go into any more detail on the plan since you are all acquainted with it. We had a meeting of the committee earlier in the afternoon, and I wish at this time to read the report adopted at that time.

"The following is a short résumé of the favorable and unfavorable aspects of the plan offered by the Children's Bureau for the obstetric care of the wives of service men and medical care of their infants under one year of age. Those eligible are the wives and infants of men in the fourth, fifth, sixth and seventh grades of the Army, Navy, Marine Corps and Coast Guard. Grades correspond to the lowest grade sergeant, corporal, first class private and private in the Army.

"The unfavorable aspects are:

"1. It is a step in the direction of socialized medicine.

"2. There is danger of this plan being extended to other groups and continued after the war at these or similar fees.

"3. The stipulated fee does not recognize the varying degrees of skill of the physician or the financial status of the soldier's wife.

"4. The stipulated fee does not recognize the various amounts of prenatal care necessary, or the various types of delivery.

(In other words, under this set fee which amounts, I think, to about $35.00, if a cesarean section were necessary, $35.00 would be the fee allowed for it.)

"On the other hand, the favorable aspects are:

"1. The plan is to be nationwide and has been publicized by the federal agencies so that if Iowa does not accept the plan, the families of enlisted men living in Iowa would be discriminated against.

"2. If this plan is refused by the medical society, there is danger of its being administered by some agency other than the State Department of Health.

"3. The soldier will be assured that his wife and infants will have adequate medical care, thereby improving his morale.

"4. The doctor will be assured that the stipulated fee for his and the hospital's services will be paid.

"Having evaluated these above facts, it is the recommendation of the Committee that this plan be accepted, thereby maintaining a position where we can, to a greater or lesser degree, direct its movement."

I *move* the adoption of the report.

The motion was seconded and carried.

The Speaker: Medical Library Committee, Dr. Joynt? Military Affairs Committee, Dr. Maxwell? Pneumonia Control Committee? Procurement and Assignment Committee?

Dr. Suchomel: I trust that all of you men have read the report published in the Handbook. I have a supplemental report to present, but before presenting this report I want to change one figure in the preliminary report wherein we state that there are 645 doctors in the service. That was true January 1, but today the total number of doctors in the service from Iowa is 713.

I wish to make the following supplementary report to this House: Since submitting our report for the Handbook, certain events have transpired which should be brought to light. About March 1, each state chairman received a sufficient number of Forms

166-A to provide one for each physician in his state. From information on this form, we are able to classify every doctor according to a set standard. We now have a complete classification on all doctors from ninety counties. The following have not as yet sent in their cards: Allamakee, Cedar, Decatur, Fayette, Harrison, Jackson, Lee, and Monona. Reports from Appanoose, Crawford and Pottawattamie are not complete. I trust that the delegates from these counties will see that reports are sent in at the earliest possible moment.

More can also be said about relocation. There are perhaps two or three locations in Iowa where an additional doctor or two might be needed. We have been endeavoring to get available physicians from some localities to relieve the situation and so far have not been successful. There are three physicians in Iowa who allegedly are physically disqualified for service who have flatly refused to cooperate, one each in Clear Lake, Oelwein, and Hazelton. It is too bad we have no authority to force these men to submit to relocation. In connection with this particular situation, all of these men were classified as available for military service. At our meeting in December, in Des Moines, the state was thoroughly combed and an availability list was made. The doctors on that list were considered available for one of two purposes, either for military, naval or governmental service, or for relocation. These men whom I have mentioned are physically disqualified, at least we are led to believe that, for military service.

We have in the State of Iowa any number of young men under thirty-seven years of age who are carried on the lists of Procurement and Assignment as essential simply because they are the only doctors in their particular community; some of them are very anxious to get into service. In order to get these men into service, it is necessary that we replace them, get a substitute, someone to take over for them, because it would not be right to deprive their particular communities of all medical service. We appealed to these physically disqualified men, therefore, asking them to relocate themselves.

There is another disturbing element burrowing into the structure of Procurement and Assignment Service. That is politics. We have had two instances where politicians (Congressmen) have interceded for certain doctors. The most flagrant of such cases came, we are sorry to admit, from Linn County. In this case the Air Surgeons Office acted on pressure from certain citizens and a Congressman to declare a doctor essential to civilian status without first consulting the national, corps area, or state body. We are happy to report that our classification of the doctor as available for service has finally been recognized and every effort is being made to get him into service. The other instance of political interference came from Winneshiek County. This is still hanging in midair.

In the April issue of the Journal of the Iowa State Medical Society we find listed the men in service. The number, as I mentioned, is 713. That includes men who have gone in since the publication of the last Journal and men who have been relieved from service. It is the opinion of the state chairman that Iowa has just about exhausted its available supply of physicians for the armed forces or any other governmental agency. With this in mind, we called a meeting of the state committee at the Hotel Fort Des Moines on Wednesday, April 28, 1943.

At this meeting the situation as it now exists in Iowa was thoroughly discussed and many individual cases were reviewed. At present those physicians who are completing one year's internship or residency are not accredited against our quota of physicians for the armed service. This is based on the premise that they have not practiced medicine in Iowa. A discussion of this problem led to a decision to request Procurement and Assignment Service in Washington, D. C., to credit against our quota physicians on the teaching staff of the University who go into service.

If this is not done, we will request that no further physicians be taken out of practice in Iowa for the remainder of 1943 except those already on the certified list.

Dr. W. L. Bierring presented two distinguished members of our profession, Dr. Underwood, State Health Officer of Mississippi, who briefly discussed the situation as it exists in that state, and Dr. Parry of Bristol, England. Dr. Parry painted a very vivid picture of conditions in and around Bristol, describing methods in giving medical care to raid casualties and also the system of medical recruitment in the British Army.

It is, I believe, the opinion of the entire committee that the situation in Iowa is not really alarming, but with approximately 725 physicians in service, we feel that we are scraping the bottom of the barrel and no additional recruitment should be carried on in Iowa except among those physicians already certified.

At this time I wish to express my appreciation for the excellent cooperation of the district representatives on Procurement and Assignment and the state society officers in easing the tremendous burden and responsibility in connection with Procurement and Assignment.

If any delegate has any question he wishes to ask about Procurement and Assignment, we shall endeavor to answer.

Member: That 715 does not include recent graduates who have been sent into service?

Dr. Suchomel: No, sir, it does not. We get no credit for those. Mr. Chairman, I *move* the adoption of the report.

The motion was seconded and carried.

The Speaker: Public Relations Committee?

Dr. Stroy: No further report.

The Speaker. Scientific Exhibits Committee? Woman's Auxiliary Advisory Committee?

Dr. J. C. Hill: Nothing additional to report.

The Speaker: Cancer Committee?

Dr. J. C. Hill: Nothing additional to report.

The Speaker: Industrial Health?

Dr. Reeder: Is Dr. Bierring here? He might have something to add.

The Speaker: Is Dr. Bierring here? (Absent.) Speakers Bureau? Tuberculosis Committee?

Dr. Painter: No further report.

The Speaker: Are there any other committees that have been overlooked? Anything from the Speakers Bureau? If not, that finishes the reports of committees, and we are on the order of memorials and communications. What does the Secretary have?

The Secretary: We have no communications to bring up at this time.

The Speaker: That brings us to new business. The first order of business will be the election of life members according to the new rule which has been adopted this afternoon.

Executive Secretary: I have some names which have been presented and checked, and I shall read them. If the delegates are present, they can verify these statements.

This is from Scott County: Drs. Strohbehn, Vollmer and Lambach, fifty years in practice and thirty years as members.

Dr. Goenne: That is correct. I *move* that they be made life members of the Society.

The motion was seconded.

The Speaker: It has been moved and seconded that these three men, Doctors Strohbehn, Vollmer and Lambach be made life members of the State Society. Are there any questions or remarks? This requires a two-thirds vote, but unless I hear a lot of opposition, I shall not stop to count the hands. All those in favor signify by saying "aye"; opposed "no." I take it we have a two-thirds vote. *The motion is carried.*

Executive Secretary: The next one is from Wapello County: "For the past two years our county society has voted to omit dues for Dr. Eppie McCrea of Eddyville. She had a stroke about three years ago and has not practiced since that date." This comes under the disability rule. Where is Dr. Henry?

Dr. Henry: The proposition meets with the approval of the Wapello County Medical Society, and I *move* that she be made a life member.

The motion was seconded and carried.

Executive Secretary: The next is from Marshall County: Dr. Ernest Mills of LeGrand and Dr. Nelson Merrill of Marshalltown. Both have practiced fifty years and both have been members for thirty years or more. Life membership has been requested for them by their county medical society. Dr. Woods?

Dr. Woods: I *move* they be granted life membership.

The motion was seconded and carried.

Executive Secretary: The next is from Wayne County: Dr. B. S. Walker of Corydon who is disabled. The request states "He is totally and permanently incapacitated by sickness. He has thus been forced to retirement during the past two years. Our county society, by affirmative vote, has presented him as an applicant for life membership to the House of Delegates."

Dr. Davis: Our society took such action with reference to Dr. Walker. I *move* that he be recommended for life membership.

The motion was seconded and carried.

Executive Secretary: The next is from Johnson County: Dr. Frank J. Rohner, who is incapacitated and probably will not be able to practice again. The county society has voted him a life member.

Dr. MacEwen: I *recommend* approval.

The motion was seconded, put to a vote, and carried

Executive Secretary: The next one is from Humboldt County: Dr. Asaph Arent of Humboldt. The request states "We are doing this because he has served faithfully many years and has always been ethical. At present he is in poor health." Is there someone from Humboldt County?

Dr. Newman: This request has the approval of the Humboldt County Medical Society, and I *move* it be granted.

The motion was seconded, put to a vote, and carried

Executive Secretary: Lee County requests life membership for Dr. Frank M. Fuller, who is incapacitated.

Dr. Dierker: You all know Dr. Fuller. He has been incapacitated for the past year. I am sure this request will meet with the approval of the State Society, and I *move* that we extend life membership to Dr. Frank M. Fuller.

The motion was seconded, put to a vote, and carried

Executive Secretary: The next is from Linn County. There are two requests, one for Dr. J. W. Eckstein of Ryan, who is physically incapacitated, and the second is for Dr. H. M. Ivins of Cedar Rapids, who is also physically incapacitated.

Dr. Suchomel: The Linn County Medical Society is remitting the dues of these two doctors and requesting life membership. Dr. Eckstein has a spinal cord lesion, and it is almost impossible for him to get around. Dr. Irvins, who was for a few years a member of the Medical Economics Committee of the Iowa State Medical Society, suffered a cerebral hemorrhage and now is absolutely unable to talk. I *move* they both be extended life membership.

Dr. Boice: I *second* the motion.

The Speaker: It has been moved and seconded that these two men be made life members. All in favor signify by saying "aye"; opposed "no." *The motion is carried.*

Executive Secretary: The last one is Sac County: Dr. W. E. Hart of Odebolt, who is retired. I don't have a more complete statement. Would Dr. Dewey care to go into that further? Is Dr. Amick here?

Dr. Amick: The Sac County Medical Society discussed this case but there was no vote taken.

The Secretary: I *move* it be laid on the table.

The motion was seconded, put to a vote, and carried

Executive Secretary: There are one or two other requests from counties where the man in question has practiced fifty years but has not been a member

for any great number of years in that time. In all of these cases we have written the county society secretary that the applicant does not meet the requirements. Since thirty years' membership has just been voted I do not see how any other action can be taken.

Dr. Hall (Fayette): May I present the name of Dr. Mercer of West Union who suffered a coronary occlusion. He has been a member, I think, at least thirty years. He is fifty-nine years of age and is totally incapacitated.

May I ask about Dr. Parker of Fayette, whether or not he is acceptable, Dr. Walter Parker? Dr. Parker is seventy-six. Dr. Walsh has practiced a little better than fifty years. He is seventy-nine.

Executive Secretary: Dr. Mercer, I know, is incapacitated, but the other two did not meet the specifications.

Dr. Hall: Dr. Mercer meets the specifications. He has the approval of the Fayette County Medical Society, and I *move* that he be given life membership.

The Speaker: Did the county society vote on it?

Dr. Hall: They did.

The Speaker: We can act on it; it is for disability. Do you move that?

Dr. Hall: I do.

The motion was seconded, put to a vote, and carried

The Speaker: Are there any other names to be presented? What other new business do we have?

Dr. Bernard: Mr. Speaker, I have two matters to bring before the House. First is Hospital Service, Incorporated. I think you all have received information from the office concerning the proposition which Hospital Service wishes to make to the medical profession. This involves a lot of technical matters and is obviously too lengthy a discussion to bring before the House. I might say that the three doctors who represent the State Society on the Board of Directors of Hospital Service, Incorporated, have met with the Board many times and are fully aware of the changes in policy which they wish to incorporate.

I may answer one question which was asked this morning, "Why didn't you send out the policy which Bankers Life wishes to propose?" The answer is this: We felt if we sent out copies of that policy to a hundred and some delegates, there would be probably seventy-five different opinions as to the coverage, and it probably would be wise to wait until a representative of the company could go through these various items and discuss them with the committee which we propose to have appointed. After that the matter will be brought back to the House for further discussion.

I want to assure you that the members of the Board of Directors of Hospital Service, Incorporated, are on the level. This matter has been discussed for a year. They propose to take no action unless it meets with the approval of the State Medical Society. The company is solvent. It is doing a good business. The men in charge know their business. Are there any questions?

Dr. Painter (Dubuque): We discussed this at our society and there is one pertinent question we thought should be considered, and that is whether the money for medical service can be paid directly to the physician, or at least the check be signed by the patient and the physician jointly, rather than making payment through the hospital to physicians.

Dr. Bernard: That is a point, Doctor. I shall read this motion. Because there is no reference committee available, and because time to discuss this subject of Hospital Service, Incorporated, is limited, I *move* that the Speaker appoint a committee of seven members of the House to consider the proposal of Hospital Insurance, Incorporated; that the meeting or meetings of this committee be open to all members of the Society; and that the time and place be announced before this session adjourns.

The Speaker: Is there a second to this motion?

The motion was seconded.

The Speaker: It is moved and seconded that a committee of seven members of the House of Delegates be appointed to consider the proposal of Hospital Insurance, Incorporated; that the meetings of this committee be open to all members of the State Society; and that the time and meeting place be announced before this session is adjourned. Is there any discussion of this motion?

Dr. Goenne: Do I understand this meeting is to take place before our meeting tomorrow, before the meeting of the House of Delegates?

Dr. Bernard: That is right.

Dr. Goenne: And that final action is to be taken tomorrow?

Dr. Bernard: I have a second motion to take care of that. That is the reason I wanted the first motion creating the committee. The next motion is to force it to bring the report back tomorrow morning.

I will *amend* my motion, then, with your permission, to ask that the report of this committee be presented at the Friday morning session of the House of Delegates.

The Speaker: Is that agreeable to the man who seconded the motion? (Agreed.)

Dr. M. C. Hennessy: You have not decided on a Friday morning session.

The Speaker: We shall change it to "the next session" of the House of Delegates. Is there any discussion?

Dr. Goenne: This matter is of such vital importance that I do not think it is possible to have a meeting between now and the session tomorrow and make a proper recommendation to the House of Delegates. I think the matter is entirely too vital to every member of the House of Delegates to be handled in a hurry. We should take more time. I am sorry that to do so would mean that the matter would have to be held over until next year's meeting, probably, but it is too vital to every man in this House of Delegates.

The Speaker: It occurs to the Chairman that the committee can do as much studying as possible be-

tween now and the next session of the House. If the proposal is not thoroughly enough digested by that time, the House can take whatever action it chooses. Something will have to be done quickly. If we cannot act tomorrow, we can leave it for the Executive Council to act upon later, sometime in the near future. It occurs to me this is a possible way of getting the matter handled. Those in favor say "aye"; opposed "no." *The motion is carried.*

Dr. Bernard: Gentlemen, it is up to you to attend this committee meeting. As Dr. Goenne said, we could not possibly discuss this in an afternoon and get anywhere. You can have all night to discuss this thing, find out all about it, and see whether or not you want it. I agree it is the most vital thing that has been presented to this House of Delegates since I have been a member of the House. There is some opposition. All these things will be considered, but some action must be taken. Hospital Service, Incorporated, has reached the point where some decision must be made concerning the policies which it proposes to sell.

The second matter which I wish to bring to your attention is a resolution. In our report considerable space was given to a discussion of the North Central Medical Conference. If you have read the report, you know the setup of the North Central Conference, which consists of the states of North and South Dakota, Nebraska, Minnesota, Iowa, and Wisconsin. The original North Central Conference grew into the National Conference on Medical Service, which is nationwide, meets every February in Chicago, and has an attendance of between six and eight hundred.

At a meeting last fall of the six states in the North Central Conference, the subject which was paramount was the question of public policy and legislation of the American Medical Association. Out of that day's session the following resolution was adopted:

"Whereas, Social and economic changes have altered the lives of our citizens, and the Federal Government has found it necessary to issue directives from time to time, we as physicians believe that it is our duty to take a more active part in the creation of such regulations as affect the practice of medicine; therefore, be it

"RESOLVED, That this National Conference on Medical Service go on record as favoring the immediate development of a stronger national economic and legislative policy governing the practice of medicine and that such a policy be integrated with each state and county; be it

"FURTHER RESOLVED, That the expression of this National Conference on Medical Service be submitted to the Board of Trustees of the American Medical Association, advising them that this resolution, or a similar one, will be submitted to the House of Delegates of the American Medical Association at its next annual meeting."

This resolution was presented by a committee from the North Central Conference to the National Conference on Medical Service and was adopted.

Following this, action was taken at the National Conference on Medical Service to present an additional resolution at the next meeting of the American Medical Association. The article by Dr. Adson which was published in the April JOURNAL (and I hope you all read it) was a summary of the work done by this North Central Medical Conference. In that summary, if you will notice, there are four things that he recommended as solutions for a new public policy and legislative activity of the American Medical Association.

Now let us consider the American Medical Association just a moment. It has no official legislative or public relations setup in Washington. The Bureau of Legal Medicine and Legislation is an unorganized, not necessarily inefficient but inactive group of men, a very small organization. The secretary of the American Medical Association and the editor of the American Medical Association are the spokesmen for the American Medical Association in Washington. To be honest, I presume that the editor does most of the talking. This is not an attack upon the two gentlemen I mention. There is, however, a feeling of unrest existing among all of you fellows and all over the country; we are the only group of states which has decided to express this opinion to the American Medical Association.

This resolution comes from about seven hundred doctors who met in February in Chicago at the National Conference on Medical Service. Before reading it, I might give you the suggestions we made through Dr. Adson in his paper:

First, that the American Medical Association assign its public policy and legislative work to the National Physicians Committee;

Second, form a National Committee on Public Policy by uniting the various state legislative and public policy organizations;

Third, form a special committee of the House of Delegates; and

Fourth, unofficially, form an interprofessional committee including the dentists and the hospitals. The dentists and the hospital associations have both set up Washington bureaus within the last year to fight their battles.

The resolution reads as follows:

"Whereas, The medical profession is conscious of its responsibilities in providing timely and adequate medical services to all of the American people, irrespective of race, creed or financial status; and

"Whereas, It believes it to be its duty and right to make available scientific facts, data and medical opinion with respect thereto, and to make known the rôle that the science and art of medicine plays in the daily lives of all Americans; and

"Whereas, The medical profession of the United States is ready to offer constructive leadership in the advancement of medical principles that will further medical service to all of the people, and to preserve not only the science and art of medicine but the standards associated with the practice of medicine in America; now, therefore, be it

"RESOLVED, That there is hereby created by this House of Delegates a Committee on Medical Service which shall be composed of the following members:

"1. The President of the American Medical Association, ex officio.

"2. The Immediate Past President of the American Medical Association.

"3. The Secretary of the American Medical Association, ex officio.

"4. A member of the Board of Trustees of the American Medical Association, designated and selected by the Board of Trustees.

"5. One member of the American Medical Association elected as hereinafter provided from each of the following nine geographical subdivisions of the United States.

(These subdivisions are the ones worked out by the United States Public Health Service; they are states which have relatively the same problems. I shall not read the states in each subdivision; that is detail.)

"The members of this House of Delegates from each of the foregoing geographical subdivisions of the United States shall elect one member of the American Medical Association to serve on said Committee; three of said nine members shall serve for one year; three shall serve for two years; and three shall serve for three years; the respective terms of office of the nine members first elected shall be decided by lot and thereafter the said terms shall be for three years each. The expiration date for the first one-year term shall be at the next ensuing annual session of the House of Delegates of the American Medical Association. Expiration dates for all terms shall coincide with the dates of the regular annual session of the House of Delegates of the American Medical Association; be it

"FURTHER RESOLVED, That the duties of the Committee on Medical Service shall be:

"1. To make available scientific facts and data and medical opinion with respect to timely and adequate rendition of medical care to the American people.

"2. To integrate the activities of the Committee on Medical Service with respective state and county committees on like activities.

"3. To establish relationships and cooperation with other allied groups who are likewise engaged in the rendition of medical care, in its various branches, to the American people.

"4. The Committee on Medical Service shall hold at least two meetings per year; one shall be held at the time and place of the Annual Meeting of this House of Delegates; the other meeting shall be held in the City of Washington, D. C., and called at the direction of the Chairman; and such other meetings as may be necessary to be called by the Chairman upon the written request of the majority of the Committee.

"5. The Committee shall forthwith and annually thereafter elect from its own membership a Chairman and Vice-Chairman.

"6. The Committee on Medical Service shall establish and maintain an office in Washington, D. C., and shall further be empowered and directed to employ a full-time Executive Director, who shall act as Secretary of the Committee and whose duties shall be specified by the Committee. Such Executive Director shall be a physician who has been actively engaged in the private practice of medicine for not less than five years during the previous ten years and who is, furthermore, informed and qualified to act as a liaison representative of said Committee.

"7. The Committee on Medical Service is further authorized to hire such legal and administrative help as is necessary; be it

"FURTHER RESOLVED, That the Committee on Medical Service shall submit a budget for its expenses for the fiscal year to the Board of Trustees of American Medical Association. (This integrates the Committee directly with the American Medical Association, and does not make it an outlaw organization. I think, from all we can find, this will not in any way infringe upon the ruling of the Board of Trustees that the American Medical Association cannot enter into any public relations or legislative setup.) It is the consensus of this House of Delegates that the Board of Trustees shall forthwith appropriate not less than fifty cents nor more than one dollar for each member of the American Medical Association so that adequate funds will be available for such Committee to carry out its work on an honorable and ethical plane in keeping with the standards of American medicine; be it

"FURTHER RESOLVED, That this Committee shall submit an annual report to the House of Delegates at its Annual Meeting; and be it

"FURTHER RESOLVED, That this resolution, upon its adoption by the House of Delegates shall be forthwith transmitted to the Board of Trustees with the request that the Board of Trustees report back its action to the House of Delegates within twenty-four hours as provided for in the Constitution and By-Laws of the American Medical Association."

Now, Mr. Speaker, I *move* that this House of Delegates of the Iowa State Medical Society endorse the resolution offered by the National Conference on Medical Service; that the resolution be made a part of the records of this House; that the delegates to the American Medical Association be instructed to join with the delegates from the Minnesota State Medical Association in presenting this resolution to the House of Delegates of the American Medical Association at its meeting next June, and that they do all in their power to assist in its adoption.

The Speaker: Is there a second to this motion?

Dr. Boice: I *second* the motion.

The Speaker: Is there any discussion?

Dr. Boice: I should like to ask a question. Will this committee replace the National Physicians Committee if this resolution should be adopted?

Dr. Bernard: I hope so.

Dr. Boice: That is your intention?

Dr. Bernard: Yes.

The Speaker: Is there any discussion on this? If not, all in favor signify by saying "aye"; opposed "no." *The motion is carried.*

I believe the question of the medical service plan which Dr. Bernard mentioned some time ago is a matter that can be handled by a standing committee of the House of Delegates, the Medical Economics Committee. I do not believe we need to appoint a special committee to study medical service plans; that is a function of the Medical Economics Committee.

Is there any other new business? If not, before we go to the last order of business, which is the Committee on Nominations, I shall appoint the committee to study hospital insurance. In appointing this committee, I realize there may be some men I name here who will be on the Nominating Committee. If you find you are elected to the Nominating Committee, let me know and I shall appoint someone to serve in your place on this Hospital Insurance Committee.

Dr. Suchomel: I think that committee you are going to appoint is more important than the Nominating Committee, and any man who is nominated on the Nominating Committee should not accept that but accept this.

The Speaker: They will have to work that out by themselves. I am going to ask Dr. Hill of Newton to act as Chairman of this committee, with Dr. Magee of Waterloo, Dr. Ober of Burlington, Dr. Armstrong of Ida Grove, Dr. Overton of Des Moines, Dr. Maxwell of Sioux City, and Dr. Goenne of Davenport. The time of the meeting: The earliest possible time, I imagine, will be after the banquet.

Dr. Fay: When and where is the next meeting of the House of Delegates?

The Speaker: I am glad you brought that up, Dr. Fay. Before we elect the Committee on Nominations we shall have to decide when the House of Delegates will meet tomorrow. Is there a motion on that?

Dr. Suchomel: I *move* that the House meet at seven-thirty tomorrow morning.

The motion was seconded.

However, the majority seemed to prefer a later hour, and the motion was amended to read that the meeting be held at eight o'clock. *The amendment was passed and the amended motion was carried.*

Dr. J. C. Hill: Mr. Speaker, may I request that the other members of this Hospital Insurance Committee meet tonight immediately after the banquet, whatever hour that is, in Parlor A.

The Speaker: Is there any further business?

Dr. Lee F. Hill: Gentlemen, we are trying our best to keep an up-to-date list of men in service in the Journal. We should appreciate it greatly if you would appoint a special committee in your county society to forward to us in the Journal office, as soon as you possibly can, any changes of address or rank of men in service. We have received a great many communications. I think the men all over the country and abroad appreciate this list of men in service in the Journal, but it is difficult for us to keep pace with the changes of address. Sometimes we have as many as a hundred in a month. Will you please ask your county societies to do their best to forward to us as soon as possible any changes of address or rank?

The Speaker: If that is all, we are ready to proceed to the election of the Nominating Committee. The delegates from the different districts will get together. Be sure to leave the name of your member of the Nominating Committee at the secretary's desk.

The delegates caucused for the purpose of electing the Committee on Nominations, and the meeting adjourned at five-thirty p. m.

HOUSE OF DELEGATES

Friday Morning, April 30, 1943

The meeting convened at eight o'clock, Dr. Woodward presiding.

The Speaker: Come to order, gentlemen. The first order of business is the roll call.

It was moved, seconded, and carried, that Dr. Loeck, of Aurora, be seated as the alternate delegate from Mitchell County in place of Dr. T. E. Blong who had been previously certified but was absent.

The Secretary called the roll and the following delegates, alternates and officers were present.

Delegates

Adams	C. L. Bain
Appanoose	J. C. Donahue
Black Hawk	E. E. Magee
Boone	A. B. Deering
Buchanan	F. F. Agnew
Calhoun	R. G. Hinrichs
Cass	G. A. Alliband
Cerro Gordo	H. D. Fallows
Cherokee	C. F. Obermann
Chickasaw	P. E. Gardner
Davis	C. H. Cronk
Decatur	G. P. Reed
Des Moines	F. G. Ober
Dickinson	T. L. Ward
Dubuque	J. C. Painter
Fayette	C. C. Hall
Floyd	O. H. Banton
Fremont	Kenneth Murchison
Harrison	H. N. Anderson
Howard	W. A. Bockoven
Johnson	E. M. MacEwen
Johnson	A. W. Bennett
Jones	H. F. Dolan
Keokuk	C. L. Heald
Kossuth	W. F. Hamstreet
Lee	B. J. Dierker
Linn	T. F. Suchomel
Marshall	A. D. Woods
Monona	E. C. Junger
Muscatine	L. C. Howe
Osceola	W. F. Thayer
Plymouth	W. J. Brunner
Pocahontas	W. F. Brinkman
Polk	R. C. Doolittle
Polk	W. E. Baker
Polk	L. F. Hill
Polk	C. W. Losh
Pottawattamie	G. V. Caughlan
Sac	J. R. Dewey

Scott	W. C. Goenne
Story	E. B. Bush
Union	A. S. Beatty
Van Buren	L. A. Coffin
Wapello	C. A. Henry
Washington	W. L. Alcorn
Webster	T. J. Dorsey
Winneshiek	F. A. Hennessy
Woodbury	C. T. Maxwell
Wright	R. D. Bernard

Alternates

Buena Vista	H. E. Farnsworth
Clayton	E. G. Kettelkamp
Humboldt	C. A. Newman
Linn	H. L. Van Winkle
Marion	E. C. McClure
Mitchell	J. F. Loeck
O'Brien	T. D. Kas
Palo Alto	G. H. Keeney
Woodbury	C. P. McHugh

State Society Officers

President-Elect	L. R. Woodward
Secretary	R. L. Parker
Treasurer	J. A. Downing
Trustee	O. J. Fay
Trustee	J. I. Marker
Trustee	M. C. Hennessy
Councilor	L. L. Carr
Councilor	C. H. Cretzmeyer
Councilor	J. B. Knipe
Councilor	J. E. Reeder
Councilor	E. F. Beeh
Councilor	J. C. Hill
Councilor	H. A. Householder
Councilor	C. A. Boice

The Secretary: The roll is called, Mr. Speaker, and we shall announce the number in just a moment.

The Speaker: We are going to assume there is a quorum present unless the Secretary says to the contrary. We shall proceed with the business. The first order of business is the reading of the minutes of the meeting of yesterday.

The Secretary read the minutes of the previous session.

The Speaker: Are there any corrections to the minutes as read? If not, they stand approved. There are 72 members present, which is a quorum to do business. The next order of business is the report of the Committee on Nominations.

Dr. Obermann: The Nominating Committee of the Iowa State Medical Society, consisting of Doctors Hennessy of Calmar, Fallows of Mason City, Ward of Arnolds Park, Obermann of Cherokee, Losh of Des Moines, Woods of State Center, MacEwen of Iowa City, Coffin of Farmington, Donahue of Centerville, Reed of Davis City and Caughlan of Council Bluffs, met in the Green Room at nine-thirty Thursday evening, April 29, 1943. Dr. Caughlan was elected Chairman and Dr. Obermann, Secretary.

The committee brings you the following nominations for office:

President-Elect: M. C. Hennessy of Council Bluffs; H. E. Stroy of Osceola; E. E. Magee of Waterloo.

First Vice President: George H. Keeney of Mallard.

Second Vice President: W. J. McGrath of Elkader.

Trustee: Oliver J. Fay of Des Moines.

Councilor, Second District: C. H. Cretzmeyer of Algona.

Councilor, Seventh District: H. A. Householder of Winthrop.

Delegate to American Medical Association: R. D. Bernard of Clarion.

Alternate to American Medical Association: C. W. Ellyson of Waterloo.

Alternate to American Medical Association (one year) to replace Dr. John Peck: George C. Albright of Iowa City.

It was moved the report be accepted. *The motion was seconded, put to a vote, and carried.*

The Speaker: The order of business now will be the election of the President-Elect. The nominees as brought forth by the committee are: M. C. Hennessy of Council Bluffs; H. E. Stroy of Osceola; and E. E. Magee of Waterloo.

Are there nominations from the floor? If not, we shall proceed to vote. As tellers I will appoint Woods of State Center, Dierker of Fort Madison, and Howe of Muscatine.

The members proceeded to cast their ballots.

The Speaker: Has everyone voted? The ballot is closed and the tellers will proceed to count the ballot.

The tellers proceeded to count the ballots.

Dr. Woods: I *move* that the rules be suspended and the Secretary be instructed to cast a unanimous ballot for Dr. Hennessy.

The motion was seconded, put to a vote and carried.

The Secretary then cast the ballot and Dr. Hennessy was declared President-Elect of the Iowa State Medical Society.

The Speaker: Will Dr. Hennessy please come forward?

President-Elect Hennessy: I shall simply say "thank you" and shall try to do the best I can. Mr. President, I should like to submit my resignation as a member of the Board of Trustees.

The Speaker: Dr. Hennessy has submitted his resignation as a member of the Board of Trustees. What do you wish to do with his resignation? Is there a motion to accept it?

Dr. J. C. Hill: I *move* we accept it.

The motion was seconded, put to a vote, and carried.

The Speaker: The Nominating Committee will bring in a nomination for one man on the Board of Trustees to serve for the balance of Dr. Hennessy's term, which is one year.

The Secretary: Mr. Speaker, the remaining ticket is still to be elected:

First Vice President: George H. Keeney of Mallard.

Second Vice President: W. J. McGrath of Elkader.

Trustee: Oliver J. Fay of Des Moines.

Councilor, Second District: C. H. Cretzmeyer of Algona.

Councilor, Seventh District: H. A. Householder of Winthrop.

Delegate to American Medical Association: R. D. Bernard of Clarion.

Alternate to American Medical Association: C. W. Ellyson of Waterloo.

Alternate to American Medical Association (one year) to replace Dr. John Peck: George C. Albright of Iowa City.

Dr. Suchomel: Mr. President, I *move* that the bylaws be suspended and that the Secretary be instructed to cast the unanimous ballot of this House of Delegates for the remainder of the candidates submitted by the Nominating Committee.

Dr. Junger: I *second* the motion.

The Speaker: You have heard the motion and the second. Are you ready for the question? All in favor signify by saying "aye"; opposed "no." *The motion is carried.*

The Secretary: Mr. Speaker, it gives me pleasure to cast the unanimous ballot for the nominees just mentioned.

The Speaker: These nominees are duly elected as officers of the Iowa State Medical Society for the ensuing year. At this time we usually decide the time and place of the next year's meeting. Has anyone a motion to make with regard to the location of our meeting next year?

Dr. C. A. Boice: I *move* that the 1944 meeting be held in Des Moines.

The motion was seconded, put to a vote, and carried.

The Speaker: Are there any committees to report?

Dr. Boice: How about the time of the 1944 meeting? Should that be left to a certain committee?

The Secretary: That is left to the Arrangements Committee.

The Speaker: Dr. Boice brought up the time of the meeting. Do we have to decide how many days we will have?

Dr. Boice: The length is settled. That was settled last year for the duration. It must be a two-day meeting.

The Speaker: I stand corrected. May we now have the report of the committee to investigate Hospital Insurance. Dr. Hill?

Dr. J. C. Hill: Mr. President, your committee wishes to submit the following report. The report consists of three motions which were carried in the committee meeting.

First, it was voted that the committee recommend to the House of Delegates that the comprehensive policy, including certain medical services proposed by Hospital Service, Incorporated, of Iowa be rejected.

Second, it was voted that we approve the principle of Hospital Service, Incorporated, entering into contracts with commercial companies to furnish surgical service to its subscribers.

Third, it was voted that the committee recommend that the House of Delegates direct the Speaker to appoint a committee to meet with the Board of Directors of Hospital Service, Incorporated, of Iowa and attempt to formulate a satisfactory substitute for the plan.

The committee adjourned somewhere in the vicinity of one a. m. today. Mr. Speaker, I *move* the adoption of this report.

The motion was seconded.

The Speaker: We shall defer this matter until we have the report of the Nominating Committee and finish the election of officers. Is the Chairman of the Nominating Committee ready?

Dr. Caughlan: Mr. President, the Nominating Committee has just met and wishes to submit the name of Dr. Sternberg of Mount Pleasant for Trustee.

The Speaker: The Nominating Committee has presented the name of Dr. Sternberg of Mount Pleasant for Trustee. Are there any other nominations? A motion for the election of Dr. Sternberg is in order.

Dr. Dierker: I *move* that Dr. Sternberg be elected.

The motion was seconded.

The Speaker: It has been moved and seconded that Dr. Sternberg be elected Trustee. Those in favor say "aye"; opposed "no." *Dr. Sternberg is elected.* Now we shall recur to the motion which is before the House on the adoption of the report of the committee to study Hospital Insurance.

The report was reread for the benefit of the members of the Nominating Committee who were not present during the first reading.

Dr. Hill: I might add that it was the consensus of the committee that the Chairman be urged to select such a committee now, because this is an important subject and for certain reasons the committee would like to have the matter disposed of with dispatch.

The Speaker: Are there remarks on this motion?

Dr. Sternberg: Could we have the last motion read again?

Dr. Hill: It was moved and seconded that the committee recommend that the House of Delegates direct the Speaker to appoint a committee to meet with the Board of Directors of Hospital Service, Incorporated, of Iowa and attempt to formulate a satisfactory substitute for the plan; that is, the plan which Hospital Service, Incorporated, proposed to us.

Dr. Sternberg: The thing is a little vague in my mind as to who is to select this committee. Is it the President?

The Speaker: The President appoints the committee.

Dr. Sternberg: He said the Speaker.

Dr. Hill: I meant the President.

The Speaker: Are there other remarks upon this report? Are you ready for the question? All in favor signify by saying "aye"; opposed "no." *The motion is carried.*

Are there other committees to report at this time? Is there any unfinished business to come before the

House of Delegates? Is there any new business to come before the House of Delegates?

Next in order is the announcement of committees.

The Secretary: The Speaker has asked me to read the following committee appointments, subject to your approval:

COMMITTEE ON CONSTITUTION AND BY-LAWS remains unchanged.

FINANCE COMMITTEE
E. C. McClure, Bussey, Chairman
A. S. Bowers, Orient
O. F. Parish, Grinnell

MEDICAL ECONOMICS COMMITTEE
C. T. Maxwell, Sioux City, Chairman
H. E. Stroy, Osceola
H. D. Fallows, Mason City
B. B. Parker, Centerville
M. I. Olsen, Des Moines

COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS
G. V. Caughlan, Council Bluffs, Chairman.
C. R. Harken, Osceola
L. K. Fenlon, Clinton

MEDICOLEGAL COMMITTEE
F. A. Ely, Des Moines, Chairman
G. C. Albright, Iowa City
*Evon Walker, Ottumwa

PUBLICATION COMMITTEE remains unchanged.

COMMITTEE ON PUBLIC POLICY AND LEGISLATION
J. W. Billingsley, Newton, Chairman
L. A. Coffin, Farmington
A. L. Jenks, Des Moines
L. R. Woodward, Mason City
R. L. Parker, Des Moines

BALDRIDGE-BEYE MEMORIAL COMMITTEE remains unchanged.

FRACTURE COMMITTEE
A. F. O'Donoghue, Sioux City, Chairman
W. G. Bessmer, Davenport
F. L. Knowles, Fort Dodge
K. R. Werndorff, Council Bluffs
L. M. Overton, Des Moines
D. N. Gibson, Des Moines

HISTORICAL COMMITTEE
W. L. Bierring, Des Moines, Chairman
J. T. McClintock, Iowa City
Murdoch Bannister, Ottumwa
F. E. Sampson, Creston
H. G. Langworthy, Dubuque

COMMITTEE ON MATERNAL AND CHILD HEALTH remains unchanged.

MEDICAL LIBRARY COMMITTEE remains unchanged.

MILITARY AFFAIRS COMMITTEE
E. B. Bush, Ames, Chairman
J. G. Macrae, Creston
F. G. Murray, Cedar Rapids

*Deceased 5-17-43.

PNEUMONIA CONTROL COMMITTEE is disbanded.

PUBLIC RELATIONS COMMITTEE
I. N. Crow, Fairfield, Chairman
H. M. Pahlas, Dubuque
C. C. Collester, Spencer

SCIENTIFIC EXHIBITS COMMITTEE remains unchanged.

WOMAN'S AUXILIARY ADVISORY COMMITTEE
E. A. Hanske, Bellevue, Chairman
Ralph Lovelady, Sidney
F. W. Mulsow, Cedar Rapids

The Speaker: You have heard these committee appointments. Are there any remarks? If not, a motion to approve these committee appointments is in order.

Dr. Bernard: I *move* their approval.

The motion was seconded, put to a vote, and carried.

The Speaker: If there is no further business, a motion for adjournment is in order.

Dr. Dewey (Sac): There is in the hands of the Secretary a letter from Dr. Hart of Sac County with reference to his application for life membership.

The Secretary: I shall read the letter to Dr. Gauger, the secretary of the county society.

The Secretary read the letter written by Dr. Hart.

Dr. Dewey: Dr. Hart is making this application on the basis of inability to practice. He has coronary disease and is not doing any business.

The Speaker: Has the county society approved it?

Dr. Dewey: Yes.

Executive Secretary: Yesterday this name was presented. I think you had left, Dr. Dewey, and Dr. Amick said the county society had not acted upon it. They have not voted this year but they did last year, and this letter states they voted favorably.

The Speaker: This request was turned down yesterday?

Executive Secretary: Yes, because of the impression that the county society had not voted on it.

The Speaker: If it had been voted on yesterday, we should have to reconsider the vote. I understand it was not voted on at all, and I rule it is in order to act upon this at the present time.

Dr. Dewey: I *move* that the House of Delegates approve the application of Dr. Hart.

Dr. Junger: I *second* the motion.

The motion was put to a vote and carried.

The Speaker: In regard to the committee to study hospital insurance, I believe that is strictly an economic proposition, and I would be going over the heads of the Medical Economics Committee if I appointed a special committee to study it. If it meets with the approval of the House of Delegates, I shall leave this in the lap of the Medical Economics Committee. If there is no objection to that, it will be ordered that way. Is there any further business before adjournment? If not, a motion to adjourn is in order.

Upon motion regularly made, seconded, and carried, the House adjourned at eight-fifty o'clock.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. W. S. REILEY, Red Oak
President-Elect—MRS. J. C. DECKER, Sioux City
Secretary—MRS. A. G. FELTER, Van Meter
Treasurer—MRS. A. E. MERKEL, Des Moines

REPORT OF THE COMMITTEE ON LEGISLATION

To me, the fear that this committee incites is amusing. Some doctors will not permit their wives to serve on the Legislative Committee. Of all the committees in our organization, our By-Laws are most definite concerning this one. It so ties the hands of the Legislative Committee that our doctor husbands have nothing to fear, nor cause for worry. It is impossible for this committee to take action on any bill or to follow any suggestion, no matter by whom it is offered, until it consults the Advisory Committee of the Iowa State Medical Society.

In June of last year, the chairman of the Public Relations, Program, and Legislative Committees met and formulated a combined program. It was decided to support the forthcoming bill for compulsory vaccination against smallpox. The thought was to educate ourselves first regarding the needs and advantages of vaccination; then to educate the lay public as often as we had an opportunity; and later to assist the doctors to pass the bill when it was introduced into the legislature.

Letters were sent to each member of the Legislative Committee, to our advisor, and to each county president, telling of the plan and enlisting their support. I wish to express my appreciation to Mrs. William Lowder, a member of the committee, and Mrs. Grant Augustine for their encouraging answers to the letter.

The medical society has always favored compulsory vaccination and we had every reason to suppose that a bill requiring vaccination before entrance to school would be introduced in the legislature this year, since it had failed in the preceding assembly.

Early in the fall the Iowa Federation of Women's Clubs voted to support compulsory vaccination, and the legislative committee of the Federation, in conjunction with the State Department of Health, was authorized to write a bill requiring the vaccination of all children before entrance to the public schools. This was done and the bill was ready to be introduced into the house. Two of our doctors' wives, Mrs. Daniel Glomset and Mrs. Hugh Woods, were largely responsible for this step.

Before the bill was presented, Governor Hickenlooper requested that it be withheld since it was of a controversial nature. The backers complied and thus it was never introduced.

As chairman of this committee, I recommend that each auxiliary member see that her own family is immunized against smallpox and influence everyone in the sphere of her acquaintance to do the same; that programs depicting the need and results of immunization be continued next year; and that the Auxiliary cooperate in aiding the doctors to pass this bill if it is introduced into the legislature at the next session in 1945.

As chairman I have contributed five articles to the Woman's Auxiliary News and have read the *Federal Legislative Bulletin*, passing it on through briefs in the News.

I have written about a hundred letters, but have received few answers. I have tried to stimulate into action our county auxiliaries. I leave it to you to decide whether you think a legislative chairman accomplishes enough to justify having one.

In conclusion, I wish to ask:

"Has all our toil been worth the triumph of our gain?
Would flowers be so glorious if we had no rain?
If all our time were spent and we found nothing done?
Could we rest beneath the harvest moon or bask beneath God's sun?"

Mrs. J. A. Downing, Chairman

REPORT OF THE COMMITTEE ON HYGEIA

Fifteen counties were divided among the five members of the Committee. Committee members were: Mrs. J. H. Chittum of Wapello, Mrs. P. E. Lohr of Churdan, Mrs. F. W. Ernst of New Albin, Mrs. E. M. Victorine of Cedar Rapids, and Mrs. I. K. Sayre of St. Charles.

Material was sent requesting that *Hygeia* be placed in all waiting rooms, schools, doctors' and dentists' offices, and beauty parlors. Eighty-three subscriptions were obtained, fifty-five less than last year. Twenty-three letters and four packages were mailed and two articles were sent to the Women's Auxiliary News.

This Committee, like all others in the Auxiliary, was considerably affected in its work by general conditions.

Mrs. I. K. Sayre, Chairman

REPORT OF THE CHAIRMAN OF PRESS AND PUBLICITY

Your State Chairman of Press and Publicity and her committee have concentrated on conducting the Woman's Page in The Journal of the Iowa State Medical Society. Some seventy articles and news items have been printed. Frequent quotations from *The Bulletin* and other sources have been used. Your Chairman continued her "Book Notes," which have run without a break since October, 1940. An annual report was sent to the National Chairman of Press and Publicity and fifty letters were written in the interest of the Woman's Page.

Mrs. K. M. Chapler, Chairman

POLK COUNTY MEDICAL AUXILIARY

A luncheon meeting of the Polk County Medical Auxiliary was held in Younkers Tea Room, May 19. There were forty-five members present. Guests were wives of the medical staff of Camp Dodge, Veterans Administration, and the State Department of Health.

A review of the book, *Ambassadors in White*, by Charles Morrow Wilson, was given by Mrs. Russell Doolittle.

The auxiliary has been meeting regularly each Thursday, sewing for the four hospitals in rotation. About 2,800 articles have been made. An attempt is being made to collect wool pieces for the Kenny Cottage—sweaters, coats, blankets of any size can be used. Look through your house during house cleaning, and send in a bundle.

The auxiliary has acted as hostess at the USO two days a month, furnishing sandwiches and coffee.

It was decided at the May meeting to contribute $30.00 to the nurses' loan fund.

Mrs. J. A. Downing, Des Moines

DOCTORS' HOUSEHOLDS URGED TO SET AN EXAMPLE IN WASTE FAT SALVAGE*

The importance of saving waste household fats in order to salvage their glycerine content should be apparent to every physician. The doctor's kitchen, like that of every other family in town, can supply at least a tablespoon of fat a day—from meat drippings, from rendered trimmings or fat skimmed from the soup kettle and no longer good for food. If that much were retrieved in every household and taken to the meat stores which collect the fat for the renderers, the amount saved would exceed the national goal of 200,000,000 pounds for 1943.

Why must we go to this trouble, in a land where more than a billion pounds of fat used to be wasted every year down the kitchen drain or into the garbage can? Because glycerine is desperately needed to feed the United Nations' war machine, and because many of America's outside sources of fats and oils have been cut off by the war.

Glycerine is indispensable in the manufacture of munitions, because it is the source of both nitroglycerine and dynamite, the first of which provides the explosives for propellants, and the second the means of military demolition. Tanks, ships and planes last longer because of paints containing glycerine. It is used as an anti-icing fluid for the propellers of fighter and bomber planes. The shock absorbers of jeeps and half-tracks, the recoil mechanisms of big guns and the firing mechanisms of depth bombs all contain glycerine.

Glycerine has an important place on the medical front, too, in both war and peace. It is one of the best known and widely used medical materials. There is scarcely a branch of therapeutics in which glycerine does not play a part. An average of more than three pounds of glycerine per hospital bed per year is used in our American hospitals. And an analysis of 15,063 prescriptions made prior to the war in a single American city showed that, with the sole exception of water, glycerine was the most-used liquid ingredient.

In military medicine the rôle of glycerine continues to grow. Even before we entered the war, large quantities of glycerine were shipped by the American Red Cross to England. In the requests made to organized medical groups in the United States for medical supplies, British authorities rated glycerine as equal in importance to surgical instruments.

Practically all the liquid sulfonamides call for glycerine. The war has given increased emphasis also to the long-established value of glycerine itself in burn therapy and surgical treatment, as well as for wound dressings. Dressings can be changed with less discomfort to the patient when they are soaked with glycerine.

The War Production Board is urging all Americans everywhere to help save the fat from which this precious liquid is made. The meat dealer from whom you purchase food will be glad to pay the prevailing rate for the kitchen fats your household conserves. The pennies will buy War Stamps—and every pound of waste cooking fats turned in will provide enough glycerine to make a half pound of dynamite or four 37-millimeter anti-aircraft shells, or their equivalents in other badly-needed materials. Doctors, set an example in your community: start your household saving waste kitchen fat today!

*From the Waste Fat Saving Committee, New York.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.

WOI—Wednesdays at 2:05 p. m.

July 5- 7 Health Precautions in Summertime
Cloyce A. Newman, M.D.

July 12-14 Malaria
Andrew W. Bennett, M.D.

July 19-21 Infantile Paralysis
James E. Dyson, M.D.

July 26-28 Plastic Surgery
Walter Kirch, M.D.

SOCIETY PROCEEDINGS

Butler County

Members of the Butler County Medical Society held a special meeting in Clarksville, Thursday evening, May 27, to honor Dr. John G. Evans of New Hartford for having completed fifty years in the practice of medicine. The dinner meeting was held in the Boyd Hotel at seven o'clock and the doctor's wives were guests for the evening. Dr. Earl C. Kepler of Greene presented Dr. Evans with an engraved fountain pen in recognition of his years of service, following which Dr. Evans responded with a short talk interspersed with poetry and stories, as well as many anecdotes concerning his fifty years of practice.

Hardin County

The regular monthly meeting of the Hardin County Medical Society was held Tuesday, June 29, at the Princess Cafe in Iowa Falls. Following dinner Verl A. Ruth, M.D., of Des Moines presented a paper on The Treatment of Fractures in Ambulatory Patients.

W. E. Marsh, M.D., Secretary

Johnson County

The Johnson County Medical Society held its annual picnic at the home of Dr. and Mrs. George C. Albright in Iowa City, Wednesday, June 2. The picnic was attended by ninety-six members and guests.

A. L. Sahs, M.D., Secretary

Linn County

The Linn County Medical Society held its annual dinner meeting in Cedar Rapids, Tuesday, May 25, at Sokol Hall. Dr. John K. von Lackum of Cedar Rapids was installed as president of the society, and Dr. Barclay J. Moon of Cedar Rapids was named president-elect. Other officers include Dr. Albert G. Byers of Coggon, vice president; Dr. Raymond J. Stephen of Cedar Rapids, secretary; Dr. Blanche W. Houser of Cedar Rapids, treasurer; Dr. Thomas F. Suchomel of Cedar Rapids and Dr. von Lackum, delegates; and Drs. Jennings Crawford and Howard L. Van Winkle, both of Cedar Rapids, alternates.

Scott County

The Scott County Medical Society held its regular monthly meeting Tuesday, June 1, at 6:30 p. m., in the Barn at Hotel Blackhawk in Davenport. A buffet dinner was followed by a general business meeting to conclude the important affairs of the society's business year.

L. J. Miltner, M.D., Secretary

Taylor County

The Taylor County Medical Society held its monthly meeting in Lenox, Tuesday, June 15, at seven o'clock at Hotel Lenox. Following dinner a short business meeting was held. The scientific program included discussions on the Cause and Prognosis of Pernicious Anemia by Charles E. Buckley, M.D., of Blockton; How to Diagnose Pernicious Anemia without the Microscope by William H. Cash, M.D., of Lenox; Pernicious Anemia of Pregnancy by George W. Rimel, M.D., of Bedford; Five Remedies to Be Used in the Treatment of Pernicious Anemia by James H. Gasson, M.D., of Bedford; and a Case Report on Pernicious Anemia by Roe B. Reed, M.D., of Clearfield. Following the discussion period a scientific film on Pernicious Anemia, prepared by William P. Murphy, M.D., of Boston, Massachusetts, was presented to the society.

W. H. Cash, M.D., Secretary

Woodbury County

The Woodbury County Medical Society held its regular monthly meeting in Sioux City, Thursday, May 27, at the Mayfair Hotel at 6:30 p. m. Richard H. Young, M.D., Assistant Professor of Neurology and Psychiatry at the University of Nebraska, College of Medicine, in Omaha, Nebraska, was the guest speaker of the evening. The topic of Dr. Young's discussion was "What Contributions Can Psychiatry Make to Medicine?"

R. T. Rohwer, M.D., Secretary

DEATH NOTICES

Eiel, Hans Edward, of Buffalo Center, aged sixty-seven, died May 29 following a heart attack. He was graduated in 1899 from the Keokuk Medical College, and at the time of his death was a life member of the Hancock-Winnebago and Iowa State Medical Societies.

Hatch, Alice M. Humphrey, of Des Moines, aged seventy-nine, died June 8 following an illness of several weeks. She was graduated in 1895 from the State University of Iowa College of Homeopathic Medicine, and at the time of her death was a life member of the Polk County and Iowa State Medical Societies.

Merrill, Nelson, of Marshalltown, aged eighty, died May 21 of a heart ailment and complications. He was graduated in 1893 from the State University of Iowa, College of Medicine, and at the time of his death was a life member of the Marshall County and Iowa State Medical Societies.

History of Medicine in Iowa

Edited by the Historical Committee

Dr. Walter L. Bierring, Des Moines, Chairman
Dr. Henry G. Langworthy, Dubuque, *Secretary* Dr. John T. McClintock, Iowa City
Dr. Murdoch Bannister, Ottumwa Dr. Frank E. Sampson, Creston

A History of Medicine in Plymouth County

Wendell L. Downing, M.D.
Le Mars, Iowa

(Continued from last month)

Dr. Howard E. Mitchell of the Veterans Administration Facility in Milwaukee was born in South Sioux City, Nebraska, in 1912. He was graduated from the University of Nebraska College of Medicine in 1936 and completed an internship of one year at the University Hospital. After a second year's residency at the New York Society for the Relief of the Ruptured and Crippled, he located in Remsen in 1939. After one year he joined the medical staff of the Veterans Administration and has been located in the Minneapolis and Milwaukee Hospitals since that time.

Dr. Robert Harvey Foss was born in Missouri Valley, Iowa, on August 26, 1915. He attended the University of Iowa, receiving a Bachelor of Arts degree in 1937. He was graduated in 1940 from the College of Medicine. He is a member of Phi Gamma, a social fraternity, Phi Beta Pi, medical fraternity, and Alpha Omega Alpha. In 1937 he was married to Flora Clapp of Shelby, Iowa. After an internship of one year in the Cleveland City Hospital, he was licensed by the National Board of Medical Examiners and located in Remsen, September 1, 1941. Dr. and Mrs. Foss have one daughter, Mary Ellen. Since July, 1942, Dr. Foss has been in the United States Army Air Corps.

STRUBLE

Dr. Leopold Wuethoff was born in Germany and was a graduate of the Sioux City College of Medicine. He was located in the village of Struble for a short time about 1903.

Dr. Harry F. Rubel was born in Le Mars November 2, 1878. He was a graduate of the University of Illinois College of Medicine. Dr. Rubel practiced in Waverly, Iowa, for a few years and was located in Struble at the onset of the war in 1917. During the war he was in France with the Medical Corps, serving in the Argonne campaign. He later attained the rank of major. Following the war he was not in active practice but lived in Le Mars and Cedar Rapids. He died in the latter city on December 1, 1941.

PLYMOUTH COUNTY HOSPITALS

LE MARS

Previous to 1905 Le Mars had no hospital, and all local patients were cared for at home. Except for a few emergency cases in which surgery was performed in the home, surgical patients had to be referred to the Sioux City or Rochester hospitals.

In 1905, due to the need of hospital facilities, a Mrs. Van Donselaar and daughter, Lena, of Hull, Iowa, rented a large frame house on what is now First Street Southwest, and opened the first hospital. About 1908 a new state law was enacted which required that all hospitals be operated by graduate nurses, and at that time Mrs. Van Donselaar sold her hospital to a newly formed hospital association. For a few years this institution was run by Miss Essie Smith, R.N., and later by a Miss Miller, R.N., but it was later abandoned and for a few months Le Mars again had no hospital facilities.

About 1905 a brick bathhouse was built on north Main Street by a Mr. Harrison, and after an unsuccessful career as a natatorium, it was purchased in 1915 by Father Feuerstein of St. Joseph's Parish and was remodeled and became a hospital. After the death of Father Feuerstein in 1916, the executors sold the building to two Le Mars physicians, Drs. Mammen and Bellaire, who operated it for a short time under the supervision of Mrs. Larson.

In 1917 Father Pape of St. Joseph's Parish purchased the hospital from its owners for $9,000.00, and that same year its operation was taken over by the Franciscian Sisters of Dubuque. It was named the Sacred Heart Hospital. From 1917 until 1923 it was operated very successfully by the sisters as a thirty-bed institution. Finding the building too small and inadequate, plans were begun to erect a new hospital. About 1900 a bequest of $7,000.00 had been received from John Maichen of Le Mars and six acres of ground in the east part of Le Mars had been purchased by Father Meis, a pioneer Le Mars priest.

In 1920 a local committee consisting of Monsignor Pape, Dr. J. M. Fettes, W. G. Bolser, R. S. Bowers, Theodore Langel, R. J. Koehler, and Frank Hentges began a campaign to raise funds for a new Catholic hospital to be built on the acreage in east Le Mars. At that time Mother Dominica, Superior of the Franciscian Sisters, offered to advance dollar for dollar, not to exceed $150,000 for a new hospital. In six weeks the sum of $85,000 was pledged and the Sisters later increased their offer, and in November, 1921, the cornerstone was laid for the new hospital. On April 28, 1923, the new, completely equipped Sacred Heart Hospital was opened with a capacity of fifty beds. Up to October 1, 1942, 19,675 patients had been treated in the hospital.

The following Sisters have been Superintendent in the Sacred Heart Hospital:

Sister M. Dionysia	1923-1924
Sister M. Celeste	1924-1926
Sister M. Aimee	1926-1932
Sister M. Cyril	1932-1940
Sister M. Ritamary	1940-1941
Sister M. Cyril	1941-

From 1923 until 1937 the Sacred Heart Hospital had a school of nursing, and since 1931 it has been on the standardized list of the American College of Surgeons.

In addition to the hospitals mentioned, Le Mars has had two other hospitals.

In 1915 Dr. A. H. Moser moved to Le Mars from Ireton, Iowa, and opened a private hospital on North Central Avenue. It continued in operation for several years.

About 1918 Dr. Harvey, a chiropractor, built a frame building on First Street Northwest which he operated as a hospital for a short time. In 1919 it was purchased by a group, among whom were William Mammen, Rev. J. J. Vollmar, and Dr. G. H. Mammen, and it began operations as the Community Hospital. For a number of years it operated successfully under the management of Miss Kinley, Miss Johnson, and Miss Elskamp, but because of an inability to complete its purchase and the general feeling that one hospital was sufficient for the needs of Le Mars, it ceased operation in 1928.

AKRON

In 1908 Dr. J. H. Kerr of Akron established a hospital in Akron. The present hospital, a large frame building on the north edge of town, has been operated successfully by Dr. Kerr and his sister, Miss Margaret Kerr, R.N., for many years.

THE LE MARS CLINIC

The Le Mars Clinic was organized in 1917-1918, at a time when in many cities of the midwest physicians associated themselves in groups or clinics for the practice of medicine. It is still in operation at its original location in the Royal Theatre Building.

The original members were Drs. J. M. Fettes, M. J. Joynt, and W. W. Larsen who were previously associated in the practice of surgery, roentgenology, and ophthalmology, otology, laryngology, and rhinology. Dr. G. H. Mammen, surgeon, and Dr. W. T. Shepard, internist, were also original members. In 1919 Dr. Mammen moved to Chicago.

The following physicians have been or are members of the clinic:

Dr. Heller	1919-1921
Dr. Joseph N. Gehlen	1919-1920
Dr. Wendell L. Downing	1920-
Dr. Archibald C. McPhaden	1923-1927
Dr. Wm. P. Shepard	1924
Dr. Chas. Shepard	1924-1926
Dr. Ames Nasland	1928-1929
Dr. Harold W. Powers	1928-1929
Dr. Laurence C. O'Toole	1929-
Dr. Hubert H. Burroughs	1934-1936
Dr. Clifford V. Allen	1935-1936
Dr. Harry L. Vander Stoep	1937-

Mr. C. A. Honnold has been business manager of the clinic since 1918.

PLYMOUTH COUNTY MEDICAL SOCIETY

Little information is available concerning the early history of the Plymouth County Medical Society. Apparently the first county society was organized in 1897 with the following officers: Dr. Mary Breen, president; Dr. C. F. Kueney, vice president; Dr. Paul Brick, secretary; and Dr. G. H. Mammen, treasurer. After a few years the society ceased to exist, but in December, 1904, the society was reorganized. Dr. E. Hornebrook of Cherokee explained the purpose of the proposed organization and the following officers were elected: Dr. M. W. Richey, president; Dr. A. H Jastram, vice president; Dr. G. H. Mammen, sec-

(Continued on page 352)

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

DISEASES OF THE BREAST—By Charles F. Geschickter, M.D., Lieutenant Commander, Medical Corps, United States Naval Reserve, director of the Francis P. Garvan Cancer Research Laboratory; with a special section on treatment in collaboration with Murray M. Copeland, M.D., instructor in surgery, Johns Hopkins Medical School. J. B. Lippincott Company, Philadelphia, 1943. Price, $10.00.

ESSENTIALS OF SYPHILOLOGY—By Rudolph H. Kampmeier M.D., associate professor of medicine, Vanderbilt University School of Medicine; in charge of the Syphilis Clinic and visiting physician to Vanderbilt University Hospital; with chapters by Alvin E. Keller, M.D., and J. Cyril Peterson, M.D. The J. B. Lippincott Company, Philadelphia, 1943. Price, $5.00.

MEDICAL PARASITOLOGY—By James T. Culbertson, assistant professor of bacteriology, College of Physicians and Surgeons, Columbia University. Columbia University Press, New York, 1942. Price, $4.25.

SYNOPSIS OF APPLIED PATHOLOGICAL CHEMISTRY—By Jerome E. Andes, M.D., director of department of health. University of Arizona; and A. G. Eaton, Ph.D., assistant professor of physiology, Louisiana State University School of Medicine. The C. V. Mosby Company, St. Louis, 1941. Price, $4.00.

SYNOPSIS OF ALLERGY—By Harry L. Alexander, M.D., professor of clinical medicine, Washington University School of Medicine, St. Louis. The C. V. Mosby Company, St. Louis, 1941. Price, $3.00.

ENCEPHALITIS: A CLINICAL STUDY—By Josephine B. Neal, M.D., clinical professor of neurology, College of Physicians and Surgeons, Columbia University. Grune and Stratton, New York. 1942. Price, $6.75.

OPHTHALMOLOGY AND OTOLARYNGOLOGY, Military Surgical Manuals II—Prepared and edited by the Subcommittee on Ophthalmology and Otolaryngology of the Committee on Surgery of the Division of Medical Sciences of the National Research Council. W. B. Saunders Company, 1942. Price, $4.00.

FUNDAMENTALS OF IMMUNOLOGY—By William C. Boyd, Ph.D., associate professor of biochemistry, Boston University School of Medicine. Interscience Publishers, Inc., New York, 1943. Price, $5.50.

LABORATORY DIAGNOSIS OF PROTOZOAN DISEASES—By Charles Franklin Craig, M.D., emeritus professor of tropical medicine, Tulane University of Louisiana. Lea and Febiger, Philadelphia, 1942. Price, $4.50.

WAR MEDICINE—Edited by Winfield Scott Pugh, M.D., Commander (M.C.) U.S.N., Retired; formerly surgeon, City Hospital, New York. Philosophical Library, Inc., New York, 1942. Price, $7.50.

STARLING'S PRINCIPLES OF HUMAN PHYSIOLOGY—Edited and revised by C. Lovatt Evans, D.Sc., Jodrell professor of physiology in University College, London; the chapters on the special senses revised by H. Hartridge, M.D., professor of physiology at St. Bartholomew's Medical College. Eighth edition. Lea and Febiger, Philadelphia. 1941. Price, $10.00.

THE 1942 YEAR BOOK OF PHYSICAL THERAPY—Edited by Richard Kovacs, M.D., professor and director of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1942. Price, $3.00.

THE 1942 YEAR BOOK OF GENERAL THERAPEUTICS—Edited by Oscar W. Bethea, M.D., professor of clinical medicine, Tulane University School of Medicine. The Year Book Publishers, Chicago, 1942. Price, $3.00.

THE PRINCIPLES AND PRACTICE OF WAR SURGERY—By J. Trueta, M.D., formerly director of surgery, General Hospital of Catalonia, University of Barcelona; assistant surgeon, Wingfield-Morris Orthopaedic Hospital, Oxford; acting surgeon-in-charge, accident service, Radcliffe Infirmary, Oxford. The C. V. Mosby Company, 1943. Price, $6.50.

DISEASES OF THE SKIN—By Oliver S. Ormsby, M.D., Rush professor of dermatology, University of Illinois, and Hamilton Montgomery, M.D., associate professor of dermatology and syphilology, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, Rochester, Minnesota. Sixth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1943. Price, $14.00.

BOOK REVIEWS

A MANUAL OF PULMONARY TUBERCULOSIS AND AN ATLAS OF THORACIC ROENTGENOLOGY

By David O. Lindberg, M.D., lecturer on tuberculosis, State University of Iowa, College of Medicine; director of roentgenology, Iowa State Sanatorium. Charles C. Thomas, Springfield, Illinois, 1943. Price, $6.50.

This interesting and concisely written manual fulfills a need which has been apparent for some time to many physicians working in the field of tuberculosis. The information is accurate, up-to-the-minute, and very practical. The text is written in such a manner that the medical student or the busy practitioner can cover the subject of pulmonary tuberculosis with brevity and definiteness.

The greatest value of this book is the positive statement of the author in placing before the medical profession the newer concepts in the evaluation of the physical signs and x-ray examinations in the diagnosis of early pulmonary tuberculosis. One chapter on general management is excellent in its conclusions.

The second part of the manual is filled with excellent and illustrative roentgenograms with descriptions which make it a quick study in modern methods of diagnosis and treatment of pulmonary tuberculosis.

This book is recommended to all medical men who wish a quick postgraduate review of the subject of pulmonary tuberculosis. J. C. P.

A TEXTBOOK OF CLINICAL NEUROLOGY

By Israel S. Wechsler, M.D., clinical professor of neurology, Columbia University, New York; neurologist, The Mount Sinai Hospital; consulting neurologist, The Montefiore and Rockland State Hospitals, New York. Fifth edition, revised. W. B. Saunders Company, Philadelphia, 1943. Price, $7.50.

The basis of this volume on neurology is the personal experience and teaching of the author at the bedside. He presents the various diseases in such a way that the signs and symptoms spring out of the anatomicopathologic groundwork and are dependent upon the underlying physiologic disturbances. He has omitted the introductory chapters on anatomy and physiology which are found in the average textbook of neurology, but I believe he is justified because there are special works which treat these subjects in more detail, and I do not think one can learn anatomy or physiology from the average neurologic textbook.

Most of the diseases of the ductless glands are not

included, but they more properly belong to general and experimental medicine. There is no psychiatric material except a chapter on neuroses and one on psychometric tests. It is a textbook of neurology and not of neuropsychiatry.

This is one of the best textbooks on neurology in recent years. It is very practicable for medical students and general practitioners. It is up to date and several new syndromes have been included. On the whole, this is a book of neurology which can be highly recommended for the general practitioner, and it should be very useful as a text for medical students. H. A. S.

CLINICAL DIAGNOSIS BY LABORATORY METHODS

By James Campbell Todd, M.D., late professor of clinical pathology, University of Colorado, School of Medicine; and Arthur Hawley Sanford, M.D., professor of clinical pathology, University of Minnesota (The Mayo Foundation) head of division on clinical laboratories, Mayo Clinic. Tenth edition, thoroughly revised. W. B. Saunders Company, Philadelphia, 1943. Price, $6.00.

Clinical Diagnosis by Laboratory Methods has been a standard textbook of laboratory procedures for many years. The tenth edition has numerous revisions in that obsolete material has been omitted and discussions of new methods, the result of research work of recent years, have been added. The book, which has always been well illustrated, has many new cuts and a few new color plates.

Some of the outstanding changes occur in the chapters on blood, clinical chemistry, and bacteriology. In the chapter on blood there are new discussions on the normal error of the erythrocyte count, the origin of blood cells, including a detailed method for the study of bone marrow and, in the section on blood groups the M and N agglutinogens and the Rh Factors are mentioned. In the chapter on clinical chemistry the value of the photelometer is discussed and there are modifications of many of the procedures outlined to adapt them for its use. Among the new procedures are the determination of some of the vitamins and enzymes such as serum amylase, the determination of the sulfonamides, Quick's method for prothrombin, also a discussion of the Kagan method for serum proteins. New bacteriologic methods include the use of the fluorescent dye for the staining of tubercle bacilli and Brewer's method for anaerobic cultures. A section on inclusion bodies, illustrated with a colored plate, is found under bacteriology of the eye. The Mazzoni flocculation test has also been added to the chapter on serodiagnostic tests for syphilis.

The book has for many years been an aid to physicians in general practice in that it helps him in his choice of the proper laboratory procedure for the disease in question and aids in the differential diagnosis and interpretation of the results, especially where no pathologist is available. This tenth edition, which is completely up to date, is also valuable to students of medicine and medical technology and to medical technicians, and it should find its place, as have previous editions, on the reference shelves of clinical laboratories.

Note: An error was found on page 441 in the procedure for sulfonamides. Several lines have been omitted from the paragraph "Method for Blood." As stated in the book, no blood precipitant —trichloracetic acid—is added to the solution.

H. W. M.

FUNCTIONAL PATHOLOGY

By Leopold Lichtwitz, M.D., clinical professor of medicine, Columbia University, New York. Grune and Stratton, New York, 1941. Price, $8.75.

This text is a thought provoker. The fields of metabolism and endocrinology present an ever-increasing volume of medical possibilities.

The author presents his opinions in chapters representing modern concepts of heat regulation, metabolism regulation, body water, carbohydrate metabolism, intracellular oxidation, the thyroid gland, mechanisms of defense, mechanisms of arthritis, mechanisms of gout, mechanisms of obesity, skeletal diseases, pluriglandular diseases, hypertension, migraine, mechanism of blood diseases, mechanism of Bright's disease, and mechanism of hepatic disorders.

The frank and clear presentation of many important medical entities makes this text significant to the modern clinician. J. W. C.

A HISTORY OF MEDICINE IN PLYMOUTH COUNTY

(Continued from page 350)

retary; and Dr. H. G. Wright, treasurer. Dr. Paul Brick was elected delegate.

Since that date the organization has been continued with more or less regular meetings. Since 1928 the county meetings have been held in conjunction with the monthly meetings of the staff of the Sacred Heart Hospital.

Dr. M. J. Joynt was county secretary for many years and Dr. L. C. O'Toole has held that office since 1929. Other officers at this time are Dr. M. J. Joynt, Le Mars, president, and Dr. W. L. Downing, Le Mars, Deputy Councilor.

(THE END)

Note: The author wishes to thank Drs. E. J. Liechty of Kingsley, W. J. Brunner of Akron, and A. H. Jastram of Remsen for their assistance in obtaining data.

REFERENCE

Freeman, W. S., Editor: History of Plymouth County, Iowa, Volumne I. B. F. Bowen and Company, Inc., Indianapolis, Indiana, 1917

Membership Roster

of the

Iowa State Medical Society

1943



Members in Good Standing as of

June 25, 1943

★Aagesen, Carl A., Dows
★Abbott, Walter D., Des Moines
Abegg, Henry H., Dougherty
Acher, Albert E., Fort Dodge
Acker, Wesley H., Waterloo
Ackerman, Emma M., Sioux City
Adair, Gael M., Anita
★Adams, Carroll O., Mason City
Adams, Ernest M., Central City
Adams, Leon P., Newton
Adams, Reta, Independence
Adrian, Frank, Sigourney
★Ady, Albert E., West Liberty
Aeilts, Eerko S., Sibley
Agnew, Fred F., Independence
★Agnew, James W., Iowa City
Ahrens, Harvey, Fort Dodge
Ahrens, Lewis H., Fontanelle
Ahrens, Richard S., Des Moines
Aid, Francis H., Burlington
Albert, Seymour M., Iowa City
Albright, George C., Iowa City
Alcock, Nathaniel G., Iowa City
Alcorn, William L., Washington
Alden, Oscar, Red Oak
Aldrich, J. Frank, Shenandoah
Aleshire, Irma, Cedar Rapids
★Allen, James H., Iowa City
Alliband, George A., Atlantic
Allison, Arthur L., Rodney
Allison, Monroe P., Northwood
★Almquist, Reuben E., Albert City
Ambery, Sebastian, Chicago, Illinois
Amdor, William F., Carbon (L.M.)
★Amesberry, Harry A., Clinton
Amick, Louis B., Sac City
★Amlie, Paul J., Tripoli
Amos, Andrew R., Beverly Hills, California (L.M.)
★Andersen, Bruce V., Greene
Anderson, Edward W., Des Moines
Anderson, Glenn J., Winterset
Anderson, Harold N., Des Moines
Anderson, Harry N., Woodbine
Anderson, Herbert W., Onawa
★Anderson, Holger M., Strawberry Point
★Anderson, N. Boyd, Des Moines
Anderson, Robert E., Chariton
Anderson, Stanley N., Onawa
★Andre, Gaylord R., Lisbon
Andrew, Earl V., Maquoketa
★Angell, Charles A., Des Moines
★Anneberg, Adrian R., Carroll
Anneberg, August R., Carroll
Anneberg, Paul D., Carroll
★Anneberg, Walter A., Carroll
Anrode, Ralph A., Davenport
Anspach, Ellen E. F., Mitchellville
Anspach, Royal G., Colfax
★Anspach, Royal S., Mitchellville
Anthony, Ernest J., Black Mountain, North Carolina
Anthony, Walter E., Ottumwa
Arent, Asaph, Humboldt (L.M.)
★Arent, Asa S., Humboldt
Arkin, Archie A., Des Moines
Armitage, George I., Murray
Armstrong, Max A., Newell
Armstrong, Robert B., Ida Grove
Armstrong, William B., Ames
Arnold, Thomas, Primghar
Arthur, William R., Hampton
Artis, George H., Cedar Rapids
Ash, William E., Council Bluffs
Ashby, Atchison A., Sioux City (L.M.)
★Ashline, George H., Keokuk
Astrom, Algot, Des Moines
Augustine, Grant, Council Bluffs
Auner, Jay F., Des Moines
Austin, Forrest J., Fort Dodge
Ayers, Chester A., Lorimor
Bacon, Joshua E., Dubuque
Bailey, John W., Des Moines
Bain, Clarence L., Corning
Bairnson, George A., Cedar Falls
★Baker, Charles J., Fort Dodge
★Baker, Robert W., Davenport
Baker, Walter E., Des Moines
Baldwin, Leon A., Riverton
Baldwin, Raymond M., Burlington
Balkema, Walter S., Sheldon
★Baltzell, Winston C., Charles City
★Balzer, Walter J., Davenport
Bannister, Murdoch, Ottumwa
Banton, Oscar H., Charles City
Barber, Oliver S., Creston
Barbour, Howard W., Mason City
Barg, Egmont H., Hampton
★Barner, John L., Des Moines
Barnes, Benjamin S., Shenandoah
★Barnes, Bernard C., Des Moines
Barnes, Frederick L., Oskaloosa
Barnes, Milford E., Iowa City
Barnett, Reu L., Atlantic
Barnett, Sylvester W., Cedar Falls
Barr, Guy E., Sioux City
Barrett, James W., Jr., Independence
Barrett, Sterling A., Waterloo
Barrett, Thomas M., Knoxville
Bartels, Robert N., Iowa City
Bartlett, George E., New Sharon
Barton, Edwin G., Ottumwa
★Barton, John C., Independence
Bartruff, Charles H., Reinbeck
Bascom, Lewis A., Nora Springs
Basinger, Byron L., Goldfield
★Bassett, George H., Sac City
★Bastron, Harold C., Red Oak
Bates, Floyd E., Osceola
★Bates, Maurice T., Des Moines
Bates, William R., Fort Dodge
Baumeister, Carl F., Jr., Avoca
Baumeister, Charles F., Avoca
★Baumgarten, Oscar, Earlville
Bay, Frank N., Albia
Beal, Arline M., Davenport
Beam, Watson W., Rolfe (L.M.)
Beardsley, David E., Cedar Rapids
Beardsley, Ralph W., Livermore
Beatty, Alexander S., Creston
Beatty, Edmund D., Mallard
Beatty, Howard G., Creston
★Beaumont, Fred H., Council Bluffs
*Becker, Royal A., Atlantic (L.M.)
Beckman, Peter W., Perry
★Beddoes, Morris G., Cascade
Beeh, Edward F., Fort Dodge
Bees, Louis E., Bennett
Behrens, George W., Eldridge
Belding, Leland J., Council Bluffs
Bell, Darrell L., Columbus, Kansas
Bell, Edward P., Pleasantville
Bellinger, Frank E., Council Bluffs
Bender, Henry A., Waterloo
Bendixen, Frederick C., LeMars
Benfer, Merrill M., Davenport
Bening, John F., Clarinda
Bennett, Andrew W., Iowa City
★Bennett, Geoffrey W., Oskaloosa
★Bergstrom, Albin C., Missouri Valley
Berkstresser, Charles F., Sioux City
Bernard, Ransom D., Clarion
★Berney, Paul W., Cedar Rapids
Bernhard, Russell W., Iowa City
Besser, Edward F., Newton
Besser, Edward L., Iowa City
Bessmer, William G., Davenport
Best, Gorden N., Council Bluffs
★Bettler, Philip L., Sioux City
Beveridge, Thomas F., Muscatine (L.M.)
Beyer, Arthur E., Guttenberg
★Bezman, Harry S., Traer
Bickert, Joseph N., Cedar Rapids
★Bickley, Donald W., Waterloo
Bickley, G. G., Jr., Waterloo
★Bickley, John W., Waterloo
Biebesheimer, George A., Reinbeck
Bierring, Walter L., Des Moines
Biersborn, Byron M., State Center
Bigelow, Charles T., Clinton
Bild, Elmer J., Ireton
Billingsley, John W., Newton
Binder, Frederick, Corning
Binford, William S., Davenport
★Bird, Raymond G., Clarion
Birge, Richard F., Des Moines
Birney, Cleanthus E., Estherville
★Bisgard, Carl V., Harlan
Bisgard, James A., Harlan
★Bishop, James F., Davenport
Black, Harold C., Des Moines
Black, John R., Jefferson
★Blackstone, Martin A., Sioux City
Blaha, George A., Whitten
★Blair, Fred L., Jr., Fonda
Block, Charles E., Davenport
★Block, Lawrence A., Davenport
★Block, Walter M., Cedar Rapids
Blome, Arthur L., Iowa City
Blome, Glenn C., Ottumwa
Blong, Theodore E., Stacyville
Blum, Aloysius A., Wall Lake
★Blum, Otto S., Waverly
Blume, Donald B., Sioux City
Bockoven, William A., Cresco
★Boden, Herbert N., Truro
★Boden, Worthey C., Davenport
★Boe, Henry, Sioux City
Boice, Clyde A., Washington
★Boice, Clyde L., Washington
★Boiler, William F., Iowa City
Boland, Francis W., Kansas City, Kansas
★Boller, Galen C., Traer
★Bond, Thomas A., Des Moines
Bond, Thomas P., Des Moines (L.M.)
Bond, Wilbert W., Des Moines
★Bone, Harold C., Des Moines
Bonnell, Frank S., Fairfield
Borgen, Donald L., Gowrie
Borre, Helge, Emerson
Borts, Irving H., Iowa City
Bos, Cornelius N., Oskaloosa
Bosch, Calvin C. F., Melvin
★Bossingham, Earl N., Clarinda
Bossingham, Ottmer N., Clarinda
Boston, Burr C., Waterloo
Boulware, Lois, Iowa City
Bourne, Melvin G., Algona
Bovenmyer, DeVoe O., Ottumwa
Bowen, Frederick S., Woodburn
Bowers, Arthur S., Orient
Bowers, Bert A., Sioux City
★Bowers, Clifford V., LeMars
Bowers, Henry W., Nevada
Bowie, Louis L., Marshalltown
Bowman, Fred A., Leon (L.M.)
Bowser, Will F., Davenport
★Boyd, Eugene J., Iowa City
Boyd, Frank E., Colfax
Boyd, Julian D., Iowa City
Boyer, Edward H., Sioux City
Boyer, Howard C., Council Bluffs
★Boyer, Ulysses S., Davenport
Bradford, Clyde R., Des Moines
Bradley, Carl L., Newhall
Brandt, Glendor A., Palo
Braunlich, George, Davenport
★Brecher, Paul W., Storm Lake
Breen, Adrian L., Independence
Breniman, Eldridge M., Ackley
★Brentan, Emanuel, Ottumwa
Brereton, Harold L., Emmetsburg
Brewster, Calvin O., Britt
★Brewster, Edward S., Boone
Bridge, Barton B., Albert City (L.M.)
Bridgeman, Harry L., Knoxville (L.M.)
Bries, Frank J., Holy Cross
Brink, Raymond J., Ayrshire
Brinker, Marion H., Yale
★Brinkhous, Kenneth M., Iowa City
Brinkman, William F., Pocahontas
Brisbine, Royal E., Burbank, California (L.M.)
Brittell, Chancey L., Chariton
★Brobyn, Thomas E., Grinnell
Brock, Walter R., Sheldon
Broderick, Clarence E., Cherokee
★Brody, Sidney, Ottumwa
Broghammer, Benjamin G., Cedar Rapids
★Brown, Addison W., Des Moines
Brown, Arthur C., Council Bluffs
★Brown, Douglas H., Davenport
Brown, Gates M., Dayton
Brown, George B., Clarion
Brown, Harold L., Sioux City
Brown, Harry W., Waterloo
Brown, James C., Littleport
Brown, Kenneth R., Lamoni
★Brown, Merle J., Davenport
Brown, Samuel J., Panora (L.M.)
★Brown, Wayne B., Mount Pleasant
Brownstone, Sidney, Clear Lake
Brubaker, Carl F., Corydon
Brubaker, John F. R., Hubbard
Bruce, James H., Fort Dodge
Bruechert, Henry N., Parkersburg
Brumer, Herbert B., Clinton
Brummitt, Charles F., Centerville
★Bruner, Julian M., Des Moines
Brunk, Amos W., Prescott
Brunner, Walter J., Akron
Brush, C. Herbert, Shenandoah
★Buchanan, John J., Milford
Buckley, Charles E., Blockton
Buckmaster, Raleigh A., Dunkerton
Bullock, Alfred H., Cushing
★Bullock, Grant D., Washta
Bullock, William E., Lake Park
Burbank, Dean S., Pleasantville
Burbank, Frank E., Pleasantville
★Burch, Earl S., Dayton
Burcham, Thomas A., Des Moines
★Burdick, Francis D., Shenandoah
★Buresh, Abner, Lime Springs
★Burgeson, Floyd M., Des Moines
Burgess, Arthur W., Iowa Falls
★Burke, Jerome C., Clinton
Burke, Thomas A., Mason City
Burke, Thomas J., Davenport
★Burleson, Marvin W., Fort Dodge
★Burnett, Francis K., Clarinda
Burnside, Raymond A., Des Moines
Bursheim, Peder J., Des Moines
Bush, Earl B., Ames
Butler, Margaret K., Fort Dodge
Butterfield, Edwin J., Dallas Center (L.M.)
Butterfield, Elwyn T., Dallas Center
Butterfield, Rosabell A., Indianola (L.M.)

★Butts, John H., Waterloo
Butzke, Ernest J., Hampton, Virginia
★Buxton, Otho C., Jr., Webster City
Buzard, Irenarch S., Jefferson (L.M.)
Byers, Albert G., Coggon
★Byers, Walter L., Sheffield
Calbreath, Lloyd B., Humeston
★Caldwell, John W., Des Moines
★Callahan, George D., Iowa City
Campbell, Benjamin F., Burlington
Campbell, Nathan, Yarmouth
Campbell, Thomas R., Sioux Rapids
Campbell, Walter V., Oskaloosa
Canfield, Herbert W., Baxter
Cantrell, Carmi M., Lone Tree
Cantwell, John D., Davenport
★Carey, Edward T., Jr., Davenport
Carey, Michael J., Council Bluffs
Carlile, Amos W., Manning
★Carlson, Elmer H., Muscatine
Carlson, Frank G., Mason City (L.M.)
Carlson, Leslie A., Fayette
Carney, Roscoe P., Davenport
Carpenter, Frank, Reasnor
Carpenter, Fred E., Newton
★Carpenter, Ralph C., Marshalltown
Carpenter, William S., St. Louis, Mo.
Carr, Leslie L., West Union
Carryer, Carl H., Des Moines
Carson, Andros, Des Moines (L.M.)
Carstensen, Albert B., Linn Grove
★Cartwright, Forrest P., Grand Junction
Carver, David C., Rockwell City
Carver, Harry E., Earlham
Carver, William F., Fort Dodge
Cary, Walter, Dubuque
Cash, William H., Lenox
★Castell, John W., Fairfield
★Castles, William A., Rippey
Catterson, Leroy F., Oskaloosa
Caughlan, Gerald V., Council Bluffs
Cauley, Francis P., Anthon
★Caulfield, John D., New Hampton
Chadbourne, Theodore L., Vinton (L.M.)
Challed, Don S., Cedar Rapids
Chamberlain, Lowell H., Des Moines
Chambers, Charles L., Des Moines
★Chambers, James W., Des Moines
Chapler, Keith M., Dexter
Chapman, Frederick J., Keokuk
★Chapman, Robert M., Cedar Rapids
Charlton, Thomas B., Clinton
Chase, Sumner B., Fort Dodge
Chase, Walter E., Rippey
★Chase, William B., Jr., Des Moines
Chase, William B., Sr., Des Moines
Chenoweth, Charles E., Mason City
★Chesnut, Paul F., Winterset
Chester, Walter S., Albia
Childs, Hal A., Creston (L.M.)
Chilson, Alvin H., Plymouth
Chisholm, Roderick B., Griswold
Chittum, John H., Wapello
Chittum, Josiah M., North Liberty
Choate, Cora W., Marshalltown
Christensen, Emil M., Garner
Christensen, Eunice M., Iowa City
Christensen, Everett D., Iowa City
Christensen, John R., Eagle Grove
★Christiansen, Charles C., Dixon
Christiansen, John E., Durant
Christy, Edgar, Glenwood (L.M.)
Church, Ruth E., Washington
★Clapsaddle, Dean W., Burt
Clapsaddle, John G., Burt
Clark, Frank H., Clarinda
★Clark, George H., Oskaloosa
Clark, Howard F., Stuart
★Clark, James P., Estherville
Clark, Oliver T., Keokuk
Clark, Orson W., Ogden
★Clark, Richardson E., Manchester
Clark, Thomas D., Victor
Clary, William H., Prescott (L.M.)
Clasen, Henry W., Dike
★Cleary, Hugh G., Fort Madison
Cleaves, Prentiss B., Cherokee
Closson, Charles L., Walker
★Cmeyla, Patrick M., Sioux City
Cobb, Elliott C., Sioux City
Coburn, Frank E., Iowa City
★Coddington, James H., Humboldt
Cody, William E., Sioux City
Coffin, Lonnie A., Farmington
★Cogan, Samuel, Mount Pleasant
★Cogley, John P., Council Bluffs
Cole, Elmer J., Woodbine
Cole, Fern N., Iowa Falls
Cole, Harold P., Thurman
Cole, Julia, Ames
Collester, Charles C., Spencer
Collins, Elmer E., Oskaloosa
Collins, Harry A., Des Moines
Collins, Loren E., Estherville
★Collins, Robert M., Council Bluffs
Conaway, Aaron C., Marshalltown
★Condon, Frank J., Centerville
Conmey, Roy M., Sergeant Bluff
Connell, John, Des Moines
Connelly, Edgar J., Dubuque
Conner, Frank H., Nevada
★Conner, John D., Nevada
★Conzett, Donald C., Dubuque
Cook, Clarence P., Des Moines
Cook, John O., Madrid
Cook, Kenneth G., Fairfield
★Cook, Stuart H., Rock Rapids
Cook, Walter R., Pisgah
★Cooper, Clark N., Waterloo
Cooper, Gladys A., Red Oak
Cooper, James S., Burlington
Cooper, J. Clark, Villisca
★Cooper, Raymond E., Keokuk
Cooper, Thaddeus C., Ogden
★Cooper, Wayne K., Iowa City
Corbin, Ray L., Luverne
Corbin, Sylvanus W., Corydon
*Corcoran, Louis L., Rock Rapids
★Corcoran, Thomas E., Rock Rapids
Cords, Charles H., Rudd
★Corn, Henry H., Des Moines
Cornell, Corwin S., Knoxville
★Cornell, Dale D., Greenfield
Corns, William, Marshalltown
★Coughlan, Charles H., Fort Dodge
★Coughlan, Daniel W., Des Moines
★Coughlan, Vernon H., Coggon
Courshon, Benjamin, Sioux City
★Courter, Willard O., Springville
★Cowan, John A., Sioux City
Cowgill, Frank W., Nevada
Crabb, George M., Mason City
Craig, James A., Keosauqua
Crain, Lewis F., Deep River (L.M.)
Crain, Mattie M., Deep River (L.M.)
Crain, Wendell P., Holstein
Crawford, Jennings, Cedar Rapids
Crawford, Robert H., Burlington
Cressler, Frank E., Churdan
Cretzmeyer, Charles H., Algona
Cretzmeyer, Francis X., Emmetsburg
Crew, Arthur E., Marion
★Crew, Philip I., Marion
Crew, William F., Massena
Cronk, Charles H., Bloomfield (L.M.)
★Cross, Donald L., Coon Rapids
Crow, George B., Burlington
Crow, Ira N., Fairfield
★Crowder, Roy E., Sioux City
★Crowell, Edwin A., Jr., Iowa City
Crowley, Daniel F., Des Moines
Crum, John R., Stanwood
Crumpton, Robert C., Webster City
Cruzen, John L., Barnes City
★Culbertson, Robert A., St. Ansgar
Cullen, Stuart C., Iowa City
Cullison, Robert M., Brecksville, Ohio
★Cunningham, John C., Dubuque
Cunningham, Melvin B., Norwalk
Cusick, George W., Princeton
Dahl, Harry W., Des Moines
Dahlbo, John E., Sutherland
Dahlquist, Ralph M., Decorah
Daily, Milton, Sioux City (L.M.)
Dakin, Channing E., Mason City (L.M.)
Dalbey, Glenn M., Traer
Daly, James J., Decorah (L.M.)
Danielson, May, Iowa City
Danley, Royal C., Hamburg
Darrow, Clarence A., Dubuque
Daut, Walter W., Muscatine
★Davey, William P., Emmetsburg
Davidson, Thorald E., Mason City
Davis, Arthur E., Seymour
★Dawson, Emerson B., Fort Dodge
Dawson, Leon E., Des Moines
Day, Charles S., Cedar Rapids
Day, Philip M., Oskaloosa
Day, William E., Clarksville
★Dean, Abbott M., Council Bluffs
Dean, Frank W., Council Bluffs (L.M.)
Dean, Ray H., Washington (L.M.)
Dean, William F., Osceola
de Bey, John G., Orange City
★DeCicco, Ralph, Des Moines
★Decker, Henry G., Des Moines
Decker, Jay C., Sioux City
Deering, Albert B., Boone
Deering, John S., Onawa
DeGowin, Elmer L., Iowa City
Demaree, Chester, Lacona
Denney, Benjamin F., Britt
Dennison, John C., Bellevue (L.M.)
Denny, Thomas C., Des Moines (L.M.)
DeShaw, Earl H. Monticello
Des Marias, Varina, Grundy Center
★Deters, Donald C., Schaller
Deur, Sherman J., Iowa City
Devereux, Richard L., Sioux City
Dewees, Frank L., Keokuk
Dewey, Jay R., Schaller
DeWitt, Charles H., Jr., Macedonia
DeWitt, Franklin T., Nemaha (L.M.)
★DeYarman, Kyle T., Morning Sun
DeYoung, George M., George
★DeYoung, Ward A., Glenwood
Dickey, Claude G., Des Moines
★Diddle, Albert W., Iowa City
Diddy, Keith W., Perry
Dierker, Bernard J., Fort Madison
Dierker, Frank H., Fort Madison
★Dimsdale, Lewis J., Sioux City
Dingman, Marshal E., Urbana
Dittmer, Henry A., Manchester
Ditto, Boyd L., Burlington
Dixon, George L., Tuscon, Arizona (L.M.)
Doane, Grace O., Des Moines
★Dobias, Stephen G., Chelsea
Dobson, Richard A., Sioux City
Doering, Valentine T., Fort Madison
Dolan, Henry F., Anamosa
Dolmage, George F., Buffalo Center
★Dolmage, G. Howard, Buffalo Center
Donahue, James C. Centerville
Donelan, James M., Glenwood (L.M.)
Donlan, Eugene V., Clinton
Donnell, John W., Hudson
Donohoe, Anthony P., Davenport
Donohue, Edmund S., Sioux City
Donovan, William H., Iowa City
Doolen, Glen W., Davenport
Doolittle, Russell C., Des Moines
Doornink, William, Orange City
Dorsey, Thomas J., Fort Dodge
★Doss, William N., Leon
Dowling, C. Dean, Waterloo
★Down, Howard I., Sioux City
Downing, James A., Des Moines
Downing, Leroy M., Cedar Rapids
Downing, Wendell L., LeMars
Downing, William L., Moulton (L.M.)
Downs, Vernon S., Ottumwa
★Dressler, John B., Ida Grove
Driver, Richard W., Waterloo
★Droz, A. Keith, Washington
Dubrow, James L., Los Angeles
Dulin, Evelyn H., Iowa City
Dulin, John A., Sigourney
Dulin, John W., Iowa City
Dulin, Tarana J. G., Sigourney
Duling, Raymond J., Sioux City
★Dulmes, Abraham H., Klemme
Dunkel, George K., Fairfield
Dunkelberg, Elmer I., Waterloo
Dunlap, Wallace A., Des Moines
★Dunn, Francis C., Cedar Rapids
Dunn, James, Davenport
Durkee, Harry C., Little Rock
Dusdieker, Stanley W., Des Moines
Dutton, Dean A., Van Horne
Dvorak, Joseph E., Sioux City
★Dwankowski, Carl, Mount Pleasant
Dwyer, Bernard B., Preston
Dwyer, Robert E., Clinton
Dyson, James E., Des Moines
Earl, Warren Z., Sioux City
Ebersole, Francis F., Mount Vernon
Eckstein, John W., Ryan (L.M.)
★Edington, Frank D., Spencer
Edmonds, Charles W., Onawa
★Edstrom, Henry, Dubuque
Edwards, Charles V., Council Bluffs
Edwards, James F., Ames
★Edwards, Ralph R,, Centerville
Egan, Thomas J., Bancroft
★Egbert, Daniel S., Atlantic
Egermayer, George W. Elliott
Eggleston, Alfred A., Burlington
★Egloff, William C., Mason City
*Eiel, Hans E., Buffalo Center (L.M.)
Eiel, John O., Osage
Eiel, Merrill O., Osage
★Eigenfeld, Morris L., Burlington
Eischeid, Rudolph J., Dubuque
Eland, Thomas L., Letts
★Eller, Lancelot W., Kanawha
★Elliott, Olin A., Des Moines
★Elliott, Vance J., Knoxville
★Ellis, Howard G., Des Moines
★Ellison, George M., Clinton
Ellyson, Charles W., Waterloo
★Ellyson, Craig D., Waterloo
★Elmquist, Homer S., Iowa City
★Elson, Veryl J., Danbury
Elvidge, George, Perry
Ely, Francis A., Des Moines
Emerson, Edward L., Muscatine
★Emmons, Marcus B., Iowa City
Ennis, Harry H., Decorah

Ensley, Bruce, Shell Rock
★Entringer, Albert J., Dubuque
Entz, F. Harold, Waterloo
Ericsson, Martin G., Cedar Falls
Ernst, Floyd W., New Albin
Erskine, Arthur W., Cedar Rapids
★Ervin, Lindsay J., Des Moines
★Evans, Harold J., Davenport
Evans, John G., New Hartford (L.M.)
★Evans, William I., Sac City
Everall, Bruce B., Monona
Evers, Lorance B., Iowa City
Eversmeyer, Benjamin E., Muscatine
Everson, Gustave A., Rolfe
Faber, Luke A., Dubuque
Fagen, Rodney P., Des Moines
★Fail, Charles S., Jr., Adel
Fallows, Howard D., Mason City (L.M.)
Farkas, Aladar, Iowa City
Farlow, Charles T., Farnhamville
Farnham, Alfred J., Traer
Farnsworth, Harold E., Storm Lake
Farnum, Earl P., Sibley
Faust, John H., Manson
Fay, Oliver J., Des Moines
★Fee, Charles H., Denison
Fee, Knight E., Toledo
Feightner, Robert L., Fort Madison
Feller, Alto E., Fayetteville, N. Carolina
★Fellows, Joseph G., Ames
Fellows, Liberty E., Newton
Felter, Allan G., Van Meter
Fenlon, Leslie K., Clinton
★Fenton, Charles D., Bloomfield
Fenton, Robert L., Centerville
Ferlic, Rudolph J., Lake View
Field, George A., Des Moines
Field, Grace E. W., Chicago, Illinois
Fields, Robert B., LaPorte City
Fieseler, Walter R., Fort Dodge
Files, Edward H., Cedar Rapids
Fillenwarth, Floyd H., Charles City
Finch, George H., Des Moines
Findley, William J. K., Sac City (L.M.)
Fisch, Roman J., LeMars
Fisk, Charlotte, Des Moines
Fitzgerald, Joseph D., Sloan
Fitzpatrick, Dennis F., Iowa City
★Flater, Norman C., Floyd
Fleischman, Abraham G., Des Moines
Fletcher, Frederick W., Hinton
★Flickinger, Roger R., Mason City
Flocks, Rubin H., Iowa City
Floersch, Eugene B., Council Bluffs
Floyd, Mark L., Iowa City
Flynn, Charles H., Clarinda
★Flynn, Joseph E., Jr., Iowa City
Foley, Fred C., Newell
Foley, Walter E., Davenport
Foltz, Eloise G., Perry
Fordyce, Frank W., Des Moines
★Foss, Robert H., Remsen
Foster, Jess W., Ankeny
Foster, Morgan J., Cedar Rapids
Foster, Samuel T., Adel
Foster, Warren H., Clinton
Foster, Wayne J., Cedar Rapids
Foulk, Frank E., Des Moines
★Fourt, Arthur S., Iowa City
Fowler, Charles C., Lovilia
Fowler, Willis M., Iowa City
Fox, Charles I., Pella (L.M.)
Fox, Ray A., Charles City
Franchere, Chetwynd M., Mason City
★Francis, Norton L., Iowa City
★Frank, Louis J., Sioux City
Frank, Owen L., Maquoketa
Franklin, George W., Jefferson
Fransco, Peter P., Ruthven
Fraser, James B., Des Moines
Fraser, John H., Monticello
Frech, Raymond F., Newton
Frederickson, Adolph R., Lansing
Freligh, Clarence N., Waucoma
French, Charles H., Cedar Rapids (L.M.)
French, Royal F., Marshalltown
French, Valiant D., Carson
Frey, Harry, Fairfield
★Fritchen, Arthur F., Decorah
Fritz, Lafe H., Dubuque
Fry, John L., Kalona
Fuerste, Frederick, Dubuque
Fuller, Frank M., Keokuk (L.M.)
Fullerton, Oscar L., Redding (L.M.)
★Fullgrabe, Emil A., Indianola
Furgerson, Lee B., Waterloo
Gaard, Rasmus R., Radcliffe
★Galinsky, Leon J., Oakdale
★Gallagher, John P., Oelwein
Galloway, Milton B., Webster City
Galman, James J., Hospers
Galvin, Robert J., Oelwein
Gambee, Eric J., Earling
Gamble, Robert A., Madrid
★Gamet, Elmo E., Lamoni
Ganoe, James O., Ogden
★Gantz, Albert J., Greenfield
★Ganzhorn, Harold L., Mapleton
Gardner, Harold O., Waterloo
Gardner, John R., Lisbon
Gardner, Paul E., New Hampton
★Garlinghouse, Robert O., Iowa City
Garside, Arthur A., Davenport
Gasson, James H., Bedford
Gauger, John W., Early
★Gaukel, Leo A., Onawa
Gaumer, James S., Fairfield
Gearhart, George W., Springville
Geeseka, Otto A., Mount Pleasant (L.M.)
Gelfand, Ben B., Sioux City
Gelfand, Della G., Sioux City
★George, Everett M., Des Moines
George, Joseph, Dows
Gerard, Russell S., Waterloo
Gerken, James F., Waterloo
Gernsey, Merrit N., Waverly
Gerstman, Herbert, Marion
Gessner, Frederick W., Dysart
★Getty, Everett B., Primghar
Gibbon, William H., Sioux City
Gibson, Chelsea D., Lake View
★Gibson, Douglas N., Des Moines
Gibson, Paul E., Des Moines
★Gibson, Preston E., Davenport
Giles, Francis E., Cresco
Giles, George C., Oakland
Gilfillan, Bruce L., Keokuk
★Gilfillan, Clarence D. N., Eldon
Gilfillan, George W., Bloomfield
Gilfillan, Homer J., Cantril
Gillespie, Hamilton S., Sioux City
Gillett, Francis A., Oskaloosa
Gillies, Carl L., Iowa City
Gillmore, Benjamin F., Red Oak
Gingles, Earl E., Onawa
Gittins, Thomas R., Sioux City
★Gittler, Ludwig, Fairfield
Givens, Hezekiah F., West Bend
Glasscock, Thomas J., Hawarden
★Glesne, Otto N., Fort Dodge
Gleysteen, Derk J., Alton
★Gleysteen, Rodney R., Alton
★Gloeckler, Bernhard B., Mount Pleasant
Glomset, Daniel J., Des Moines
★Goad, Robley R., Muscatine
Goen, Edwin J., Charles City
Goenne, William C., Davenport
Goggin, John G., Ossian
★Goldberg, Louie, Des Moines
Goltry, Charles F., Russell
Goodenow, Sidney B., Colo
Goodrich, Joseph A., Des Moines
★Gordon, Arnold M., Des Moines
Gorrell, Ralph L., Clarion
Gottlieb, Jacques S., Iowa City
Gottsch, Erwin J., Shenandoah
Gould, George R., Conrad
Gould, Isaac L., Kellogg
Gower, Walter E., Pocahontas
★Graber, Harold E., Fairfield
★Graeber, Frederick O., Des Moines
Graening, Charles H., Waverly (L.M.)
Graham, George W., Collins
★Graham, James W., Sioux City
Gran, Albert G., Storm Lake
Grandinetti, Arthur F., Oelwein
Grant, Cecil C., Cedar Falls
Grant, John G., Ames
★Grau, Amandus H., Denison
Gray, Henry A., Keokuk
Gray, Howard D., Des Moines
Gray, John F., Melcher
Gray, Ralph E., Eldora
Gray, Samuel T., Albia (L.M.)
★Greek, Louis M., Des Moines
Greene, James A., Houston, Texas
Greenleaf, William S., Atlantic
★Greenlee, Max R., Oskaloosa
Greteman, Theodore J., Iowa City
Griffin, Clark C., Jr., Vinton (L.M.)
Griffin, Frank L., Baldwin
Griffin, John M., Des Moines
Griffin, Sara M. F., Manson
★Griffith, William O., Shelby
Grimm, Peter G., Spirit Lake
★Grinley, Andrew V., Rockwell City
Groman, August, Odebolt (L.M.)
Gross, Erwin G., Iowa City
★Grossman, Milton D., Sioux City
Grossman, Raymond S., Marshalltown
★Grossmann, Edward B., Orange City
Grothaus, Dell L., Delta
Grubb, Merrill W., Galva
Gunn, Ross E., Boone
★Gurau, Henry H., Des Moines
Gutch, Roy C., Chariton
Gutch, Thomas E., Albia
Hage, Martin M, Lake Mills
Hagen, Edward F., Decorah
★Haines, Diedrich J., Des Moines
Haisch, Lily K., Dubuque
Haisch, Otto E., Dubuque
★Hale, Albert E., Dougherty
Hale, William H., Iowa City
Hall, Bonnybel A., Maynard
Hall, Cluley C., Maynard
Hall, Forest F., Webster City
Halloran, William H., Audubon
★Halpin, Lawrence J., Cedar Rapids
Hamilton, Benjamin C., Jefferson (L.M.)
Hamilton, Benjamin C., Jr., Jefferson
Hamilton, Cecil V., Garner
Hamilton, Harriett S., Council Bluffs
Hamilton, Henry H., Cedar Rapids
Hamilton, William F., Marshalltown
Hamstreet, Wilbur F., Titonka
Hanchett, W. McMicken, Council Bluffs
Hancock, John C., Dubuque
*Hand, William C., Hartley
Hands, Sidney G., Davenport
Hankey, Daniel C., Council Bluffs
*Hansell, William, Ottumwa (L.M.)
Hansell, William W., Des Moines
★Hansen, Fred A., Red Oak
Hansen, Niels M., Des Moines
Hansen, Robert F., Belmond
Hansen, Robert R., Marshalltown
Hansen, Russell R., Storm Lake
Hanske, Edward A., Bellevue
Hanson, Frank H., Magnolia
★Hanson, Laurence C., Jefferson
★Hardin, John F., Bedford
★Hardin, Robert C., Iowa City
Hardwig, Oswald C., Waverly
Harken, Conreid R., Osceola
Harkness, Gordon F., Davenport
Harman, Clarence, Whiting
Harman, Dean W., Glenwood
Harnagel, Edward J., Des Moines
Harp, John F., Prairie City (L.M.)
Harper, Edna K. S., Greenfield
Harriman, Walter F., Sioux City
Harrington, Arlan F., Cedar Rapids
Harrington, Raymond J., Sioux City
Harris, Clinton E., Grinnell
Harris, Grove W., Marshalltown
★Harris, Herbert H., Battle Creek
Harris, Karl S., Iowa City
Harris, Ray R., Dubuque
★Harris, Robert H., Mason City
★Harrison, Glenn E., Mason City
Hart, William E., Odebolt (L.M.)
★Hartley, Byron D., Mount Pleasant
Hartman, Frank T., Waterloo (L.M.)
★Hartman, Howard J., Waterloo
★Hartung, Walter, Iowa City
Hasek, Victor H., Cedar Rapids
Hastings, John C., Elma
*Hatch, Alice H., Des Moines (L.M.)
Haugen, Albert I., Ames
Haumeder, Hans, New Hampton
Haumeder, Maria E., New Hampton
★Havlik, Aloysius J., Tama
Hawkins, Emmet L., Council Bluffs
Hawley, Olin B., Corning
Hayek, John M., Des Moines
★Hayne, Willard W., Paullina
Hazard, Charles M., Arlington
Hazlet, Kenneth K., Dubuque
Heady, Conda C. C., Bloomfield (L.M.)
Heald, Clarence L., Sigourney
Healy, Maurice A., Boone
★Healy, Maurice J., Boone
Heathman, Frank E., Pocahontas
Hecker, Frederick A., Ottumwa
★Hecker, John T., Cedar Rapids
★Hedgecock, Lewis E., Hampton
Heetland, Louis H., Sibley
★Heffernan, Chauncey E., Sioux City
Heilman, Ernest S., Ida Grove (L.M.)
Heise, Carl A., Missouri Valley
★Heise, Carl A., Jr., Missouri Valley
★Heitzman, Paul O., Burlington
Heles, John B., Dubuque
★Henderson, Lauren J., Cedar Falls
★Henderson, Walker B., Oelwein
Hendrickson, Alvin H., Sioux City
Henely, Edmund, Nora Springs
Henkin, John H., Sioux City
Hennes, Raphael J., Oxford
Hennessy, Felix A., Calmar
★Hennessy, J. Donald, Council Bluffs
Hennessy, M. Charles, Council Bluffs
★Henning, Garold G., Milford
Henry, Clyde A., Farson
Henry, Hiram B., Des Moines
Herman, John C., Boone
*Hermence, George E., Marshalltown
Hermsen, Paul J., Bronson

Herny, Peter M., Prairie City
★Herrick, Thomas G., Gilmore City
Herrmann, Christian H., Jr., Amana
Herron, David A., Alta
Hersch, Thomas F., Cedar Rapids
★Hersey, Nelson L., Independence
★Hess, Ardo M., West Union
Hess, Howard R., Cedar Rapids
Hess, William C., Cresco
★Hessin, A. Laurence, Iowa City
Heusinkveld, Henry J., Jr., Clinton
Hickenlooper, Carl B., Winterset
★Hickerson, Luther C., Brooklyn
Hickman, Charles S., Centerville
★Hicks, Wayland K., Sioux City
Hight, William B., Des Moines
Hill, Christine E., Council Bluffs
★Hill, Don E., Clinton
Hill, James C., Newton
Hill, James W., Mount Ayr
Hill, Julia F., Pittsburgh, Pennsylvania
Hill, Lee F., Des Moines
Hills, Henry M., Lamoni (L.M.)
Hills, Robert A., Russell
Hinrichs, Robert G., Manson
★Hobart, Francis W., Lake City
*Hoegen, Joseph A., Wyoming
Hoeven, Edward B. Ottumwa
Hoffman, Paul M., Tipton
Hoffmann, Alfred A., Waterloo
Hoffmann, William P., Davenport
Hofstetter, George, Clinton (L.M.)
Hogle, William M., Keokuk
Holbrook, Francis R., Des Moines
Hollis, Edward L., Marengo
Holman, Henry D., Mason City
Holmes, Wilson W., Keokuk
Holtey, Joseph W., Ossian
Homan, Leo J., Oxford Junction
Hombach, Walter P., Council Bluffs
Hombach, William P., Council Bluffs
Hommel, Placido R. V., Elkader
★Honke, Edward M., Sioux City
Hooper, Lester E., Indianola
Hope, Justin M., Washington, D. C.
Hopkins, David H., Glidden
Hornaday, William R., Des Moines
Horton, Vincent J., Calmar
Hosford, Horace F., Burlington
★Hospodarsky, Leonard J., Ridgeway
Hotz, Edward J., Strawberry Point
★Houlahan, Jay E., Mason City
★Houlihan, Francis W., Ackley
Houlihan, Thomas J., Ida Grove (L.M.)
Householder, Harold A., Winthrop
Houser, Blanche W., Cedar Rapids
Houser, Cass T., Cedar Rapids
Houston, Bush, Nevada
Hovenden, John H., Laurens
★Howar, Bruce F., Jewell
Howard, Fred H., Strawberry Point
Howard, Lloyd G., Council Bluffs
Howard, William A., Ottumwa
Howard, William H., Minneapolis, Minn.
Howe, Lysle C., Muscatine
Howell, Elias B., Ottumwa
Howland, Charles F., Des Moines
★Hoyt, Charles N., Cedar Falls
Hoyt, Lester H., Indianapolis, Indiana
Hubbard, Frank A., Columbus Junction
Hudek, Joseph W., Garnavillo
Hudson, Jessie B., Hampton
★Hughes, Robert O., Ottumwa
Hull, Henry C., Washington (L.M.)
Huntley, Charles C., Avoca
★Hurevitz, Hyman M., Davenport
Huston, Daniel F., Burlington
Huston, Herbert M., Ruthven
★Huston, Marshall D., Centerville
Huston, Samuel W., Mount Pleasant
Hyatt, Charles N., Albia (L.M.)
★Hyatt, Charles N., Jr., Humeston
Hyndman, Olan R., Denver, Colorado
Ihle, Charles W., Cleghorn
★Ihle, Charles W., Jr., Cleghorn
Ingham, Paul G., Mapleton
Ingraham, David R., Sewal
Irish, Thomas J., Forest City
Irving, Noble W., Des Moines
Isenberg, Bertice A., Lohrville
Ivins, Harry M., Santa Cruz, Cal. (L.M.)
Jackson, James M., Jefferson
Jackson, James S., Mount Pleasant
Jackson, Robert L., Iowa City
Jacoby, James A., Burlington
Jaenicke, Kurt, Clinton
★James, Audra D., Des Moines
★James, David W., Kamrar
James, Lora D., Fairfield
James, Peter E., Elkhorn
Jameson, Robert E., Davenport
Janse, Philip V., Algona
★Jansonius, John W., Eldora
★January, Lewis E., Iowa City
Jardine, George A., New Virginia
Jarvis, Fred J., Oskaloosa
Jarvis, Harry D., Chariton
Jay, Leon D., Waverly
Jeans, Philip C., Iowa City
Jeffries, Roy R., Waukon
Jenkins, George A., Albia
★Jenkins, George D., Burlington
Jenkinson, Harry R., Iowa City
Jenks, Alonzo L., Jr., Des Moines
★Jensen, Arnold L., Council Bluffs
Jensen, Arthur E., Humboldt
Jensen, Leroy E., Audubon
Jepson, William. Sioux City (L.M.)
Jerdee, Ingebrecht C., Clermont
Jessup, Parke M., Muscatine
Jinderlee, Joseph W., Cresco
★Jirsa, Harold O., Cedar Rapids
Johann, Albert E., Des Moines
Johnson, Aaron Q., Sioux City
Johnson, Albert P., Sigourney (L.M.)
Johnson, Aldis A., Council Bluffs
Johnson, Chester H., Cherokee
Johnson, Clarence A., Coon Rapids
Johnson, George M., Marshalltown
Johnson, Glenn R., Ottumwa
Johnson, Harvey A., Atlantic
Johnson, J. A. William., Newton
Johnson, Jonathan, Alden
Johnson, Melvin T., Lake Mills
Johnson, Norman M., Clarinda
★Johnson, Robert J., Iowa Falls
★Johnson, William A., Alden
Johnson, William A., Fort Dodge
★Johnston, C. Harlan. Des Moines
Johnston, Florence D., Cedar Rapids
Johnston, George B., Estherville
Johnston, Harry L., Ames
Johnston, Helen, Des Moines
Johnston, Howard H., Hampton
Johnston, Kenneth L., Oskaloosa
Johnston, Thomas H., Spencer
Johnston, Wayne A., Dubuque
★Johnstone, Alexander A., Keokuk
Jones, Cecil C., Des Moines
Jones, Charles L., Gilmore City
★Jones, Clare C., Spencer
Jones, Harry J., Cedar Rapids
Jones, Henry D., Schleswig
Jones, Lewis H., Wall Lake (L.M.)
Jones, Thomas S., Waukee
★Jongewaard, Albert J., Jefferson
Jongewaard, Jeannette, Jefferson
Jordan, Carl F., Des Moines
Jordan, John W., Maquoketa
Jowett, John R., Clinton
★Joyner, Nevill M., Fort Dodge
Joynt, Albert J., Waterloo
Joynt, Martin J., LeMars
Joynt, Michael F., Marcus
Judd, Addison L., Kanawha (L.M.)
Junger, Emil C., Soldier
Kaach, Harry F., Clinton
Kahrick, Ola A., Grandview
Kadel, Merl A., Tipton
Kahler, Hugo V., Reinbeck
Kanealy, John F., Iowa City
★Kaplan, David. Sioux City
Kas, Thomas D., Sutherland
Kassmeyer, John C., Dubuque
★Kast, Donald H., Des Moines
Katherman, Charles A., Sioux City
Kauffman, William A., Marshalltown
Kaufman, Ernest L., Ft. Atkinson
Kaufman, Irving, Dubuque
Keane, John L., Dubuque
Keech, Roy K., Cedar Rapids
Keeffe, Patrick E., Sioux City
Keen, Burlin E., Des Moines
Keeney, George H., Mallard
★Keislar, Henry D., Iowa City
Keith, Charles W., Strawberry Point
★Keith, John J., Marion
★Kelley, Edmund J., Des Moines
Kelley, Laurence E., Des Moines
Kellogg, Orson A., Dows
★Kelly, Dennis H., Des Moines
*Kelly, Harry D., Council Bluffs
Kelly, Joseph I., Burlington (L.M.)
Kenefick, John N., Algona
Kennedy, Charles S., Logan
Kennedy, Edward P., Swaledale
Kennedy, Elizabeth S., Oelwein
Kennedy, William C., Somers
Kepler, Earl C., Greene
Kern, Lester C., Waverly
Kerr, H. Dabney, Iowa City
Kerr, Johnston H., Akron
Kerr, William, Randolph
★Kerr, Willam H., Hamburg
Kershner, Frank O., Clinton
Kersten, Ernest M., Fort Dodge
Kerwick, Joseph M., New Hampton
Kessel, George, Cresco (L.M.)
Kessell, James E., Des Moines
Kestel, John L., Waterloo
Kettelkamp, Enoch G., Monona
Keyser, Ralph E., Marshalltown
★Kieck, Ernest G., Cedar Rapids
Kiesau, Frederick W., Postville
★Kiesau, Milton F., Postville
Kiesling, Harry F., Lehigh
Kilgore, Benjamin F., Des Moines
Kimball, John E., West Liberty
★Kimberly, Lester W., Davenport
King, David H., Batavia
★King, Dean H., Spencer
King, Harold N., Hampton, Virginia
King, Oran W., Des Moines
★King, Ross C., Clinton
King, Thomas A., West Union
Kingsbury, Charles L., Keokuk
Kingsbury, Earl L., Keokuk
Kirch, Walter A. W., Des Moines
Kirkegaard, Smith C., Ringsted
Kitson, Walter W., Atlantic
Klein, John L., Muscatine (L.M.)
Klein, John L., Jr., Muscatine
Kleinberg, Henry E., Des Moines
Kline, Samuel, Sioux City
★Klocksiem, Roy G., Odebolt
★Klok, George J., Council Bluffs
★Kluever, Herman C., Fort Dodge
Knight, Benjamin L., Cedar Rapids
Knight, Edson C., Garwin
★Knight, Russell A., Rockford
Knipe, James B., Armstrong
Knipfer, Robert L., Jesup
★Knoll, Albert H., Dubuque
Knopf, Eugene J., Chicago, Illinois
Knott, Peirce D., Sioux City
★Knott, Robert C., Sioux City
Knowles, Fred L., Fort Dodge
Knox, James M., Cedar Rapids
Knudsen, Hubert K., Clinton
Koch, Fred E., Burlington
Koch, George W., Sioux City (L.M.)
★Koehne, Frederick D., Audubon
Koeneman, Eugene O., Eldora
Koob, William R., Brayton
Kooiker, Herman J., Milford
★Koontz, Lyle W., Vinton
★Korfmacher, Edwin S., Grinnell
Kornder, Louis H., Davenport
Korns, Horace M., Iowa City
Koser, Donald C., Cherokee
★Kottke, Elmer E., Des Moines
★Krakauer, Max, Davenport
Kraus, Paul S., Cherokee
Krause, Charles S., Cedar Rapids
Krejsa, Oldrich, Cedar Rapids
Krenning, Katherine S., Davenport
Krepelka, George E., Osage
Kreul, Dwight G., Davenport
Kriebs, Frank J., Elkport (L.M.)
Kriechbaum, Horace T., Davenport
Krigsten, Joe M., Sioux City
★Krigsten, William M., Sioux City
★Kruckenberg, William G., Mount Vernon
*Kruse, Henry H. W., Rockford
Kuhl, Augustus B., Davenport
Kuhl, Augustus B., Jr., Davenport
Kuhn, Leo C., Decorah
Kulp, Raymond R., Davenport
★Kuntz, George S., Sibley
★Kurth, Clarence J., Council Bluffs
Kurtz, Cecelia M., Cedar Rapids
Kyle, William S., Washington
Labagh, Nicholas W., Mystic
Lacey, Thomas B., Glenwood
★LaDage, Leo H., Davenport
Ladd, Fred G., Cedar Rapids
LaForce, Edward F., Burlington (L.M.)
★Lage, Raleigh H., Iowa City
Laidley, Wallace G., Ogden
*Laird, John W., Mount Pleasant
Lamb, Frederick H., Davenport
Lamb, Harry H., Davenport
Lambach, Frederick, Davenport (L.M.)
Lampe, Elmer L., Bellevue
★Lande, Jacob N., Sioux City
★Langford, William R., Epworth
Langworthy, Henry G., Dubuque
★Lannon, James W., Clear Lake
Larimer, Robert N., Sioux City
Larsen, Elmer A., Centerville
★Larsen, Harold T., Fort Dodge
Larson, Andrew G., Dickens
★Larson, John B., Laurens
★Larson, Lester E., Decorah
★Larson, Marvin O., Hawarden
★Laughlin, Ralph M., Tipton
Launder, Frank T., Garwin (L.M.)
Launder, Lloyd H., Marshalltown
Lease, Nimrod J., Crawfordsville (L.M.)
Lee, Gisle M., Thompson (L.M.)
Lee, Wayne R., Burlington
Leehey, Florance P., Oelwein

★Leehey, Paul J., Independence
Leffert, Frank B., Centerville
★Lehman, Emery W., Des Moines
Leighton, Lewis L., Fort Dodge
★Leik, Donald W., Dubuque
★Leinbach, Samuel P., Belmond
Leinfelder, Placidus J., Iowa City
Leiter, Herbert C., Sioux City
★Lekwa, Alfred H., Story City
★Lemon, Kenneth M., Oskaloosa
★Lenaghan, Robert T., Clinton
Lenzmeier, Albert J., Davenport
Leonard, Bertram B., Jr., Anthon
Leonard, Earl R., Ocheyedan
Leonard, Frederick S., Dubuque
★Leserman, Lester K., Rolfe
Lessenger, Ernest J., New London
Lewis, Samuel J., Columbus Junction
★Lewis, William B., Webster City
Lichter, Theodore W., Edgewood
Liechty, Ernest J., Kingsley
Lierle, Dean M., Iowa City
Liken, John A., Creston
★Limbert, Edwin M., Council Bluffs
Limburg, J. Irwin, Jefferson
★Limburg, John I., Jr., Jefferson
Lincoln, Simon E., Des Moines
Lindsay, Vernard T., Glidden
Link, Martha A. M., Dubuque
Linn, Ellis G., Des Moines
Liska, Edward J., Ute
★Lister, Kenneth E., Chariton
Little, Luther W., Atkins
Lloyd, John M., Washington
★Locher, Robert C., Cedar Rapids
Lock, Arthur L., Rock Valley
Lockhart, Harold A., Cedar Rapids
★Loeck, John F., Aurora
Loes, Anthony M., Dubuque
Lohman, Frederick H., Waterloo
★Lohmann, Carl J., Burlington
Lohr, Oscar C., Churdan
★Lohr, Phillips E., Churdan
Loizeaux, Charles E., Dubuque
★Long, Draper L., Mason City
★Longstreth, Clyde M., Atlantic
★Longwell, Freeman H., Iowa City
Longworth, Wallace H., Boone
Loosbrock, John F., Perry
Loose, David N., Maquoketa (L.M.)
★Lorfeld, Gerhard W., Davenport
Losh, Clifford W., Des Moines
Lott, Guy A., Osage
Lott, Robert H., Carroll
Love, Francis L., Iowa City
★Lovejoy, E. Parish, Des Moines
Lovelady, Ralph, Sidney
Lovett, Charles E., Lineville
Lovett, Earl D., Vinton
Loving, Luther W., Estherville
★Ludwick, Arthur L., Jr., Waterloo
Luehrsmann, Bernard C., Dyersville
Luehrsmann, Bernard H., Dyersville
Luginbuhl, Christian B., Des Moines
Luke, Edward, Coin
Lundvick, Arthur W., Gowrie
Luse, Ralph F., Clinton
Luthy, Karl R., Middleton
Lutton, John D., Sioux City
Lynch, Robert J., Des Moines
Lynn, Arthur R., Marshalltown
Lynn, Clarence E., Dubuque
Lytle, Carl C., Dubuque
★MacDougal, Roderick F., Cedar Rapids
MacEwen, Ewen M., Iowa City
★Mackie, Donald G., Charles City
Mackin, M. Charles, Des Moines (L.M.)
MacLeod, Hugh G., Greene
Macrae, James G., Creston
Madsen, Henry B., Richmond, Indiana
★Magaret, Ernest C., Glenwood
Magarian, Sennacherib M., Long Beach, California
Magee, Emery E., Waterloo
Magoun, Charles E., Topeka, Kansas
Mahin, Frank M., Ainsworth
★Maiden, Sydner D., Council Bluffs
★Mailliard, Robert E., Storm Lake
★Maire, Eugene J., Vail
Maloy, Wayland H., Shenandoah
Manahan, Charles A., Vinton
Mantle, William B., Albion
Mantz, Russell L., Cedar Rapids
Maplethorpe, Charles W., Toledo
★Marble, Edwin J., Marshalltown
Marble, Ira A., Sheffield
Marble, Pearl L., Liscomb
★Marble, Willard P., Marshalltown
Marek, Joseph E., Mason City
Maresh, George, Iowa City
★Margolin, Julius M., Perry
★Marinos, Harry G., Mason City
Maris, Cornelius, Sanborn
Maris, Gerrit, Hull
Maris, William, Sioux Center
Mark, Edwin M., Clarksville
★Marker, John I., Davenport
★Marquis, Fred M., Waterloo
★Marquis, George S., Des Moines
Marr, James, Silver City
★Marrs, Walford D., Tabor
Marsh, William E., Eldora
Martin, George H., Eagle Grove
Martin, Hobart E., Clinton
★Martin, James W., Holstein
Martin, John F., Latimer
★Martin, Lee R., Council Bluffs
Martin, Loran M., Fort Dodge
★Martin, Ronald F., Sioux City
Martin, Sidney D., Carroll
Mason, Stella M., Mason City
Masson, Hervey F., Washington
★Mast, Truman M., Washington
★Mater, Dwight A., Knoxville
Matheson, John H., Des Moines
Mathias, John P., Mediapolis (L.M.)
Mathiasen, Aileen E., Council Bluffs
Mathiasen, Henning W., Indianapolis, Ind.
Matthews, Damon G., Milton
Matthews, Robert J., Clarinda
Matthey, Carl H., Davenport
Matthey, Walter A., Davenport
★Mattice, Lloyd H., Danbury
Mattison, George, Jr., Akron
Mauer, George A., LeMars
Mauer, Richard E., Laurens
★Mauritz, Emory L., Des Moines
Maxwell, Charles T., Sioux City
Maxwell, John, What Cheer
May, George A., Des Moines
McAllister, James, Odebolt
McBride, James T., Des Moines
McBride, Robert H., Sioux City
McBurney, George F., Belmond
McCaffrey, Eugene H., Des Moines
McCall, John H., Allerton
McCarl, J. Jay, Sac City
McCarthy, Frank D., Sioux City
McCartney, William H., Des Moines
McCauliff, Guy T., Webster City
McClean, Earl D., Des Moines
McClintock, John T., Iowa City (L.M.)
McClure, Ernest C., Bussey (L.M.)
McClure, Gail A., Ames
McClurg, F. Haven, Fairfield
★McConkie, Edwin B., Cedar Rapids
McConkie, Willis L., Carroll
McConnaughey, James T., Mount Pleasant
★McCoy, Harold J., Des Moines
McCrary, Warren E., Lake City
McCrae, Eppie S., Eddyville (L.M.)
McCreedy, Murry L., Brighton
McCreery, John W., Whittemore
McCreight, George C., Des Moines
★McCuistion, Harry M., Sioux City
★McDaniel, John D., Marengo
McDannell, John, Nashua
★McDonald, Donald J., Des Moines
McDonald, James E., Mason City (L.M.)
McDowall, Gilbert T., Gladbrook
McDowell, William O., Grundy Center
McFadden, Irma M., Dubuque
McFarland, Guy E., Ames
★McFarland, Guy E., Jr., Ames
★McFarland, Julian E., Ames
McGill, Arthur A., Danbury
★McGilvra, Raymond I., Guthrie Center
★McGowan, James P., Harlan
McGrane, Merle J., New Hampton
McGrath, William J., Elkader
McGready, Joseph H., Independence (L.M.)
McGuire, Kenneth L., Keota
McGuire, Roy A., Fairfield
McHugh, Charles P., Sioux City
McKean, Alexander C., Ladora
McKean, Frank F., Allison
McKee, Albert P., Iowa City
★McKee, Thomas L., Keokuk
McKirahan, Josiah R., Wayland
★McKitterick, John C., Burlington
McLaughlin, Charles W., Washington
*McMahon, George T., Waukee
McMahon, Thomas, Lawler (L.M.)
McManus, Joseph P., Graettinger
★McMeans, Thomas W., Davenport
McMillen, Arch S., Fort Dodge
McMurray, Edward A., Newton
McNamara, Frank P., Dubuque
★McNamee, Jesse H., Des Moines
McNaughton, Luther D., Eagle Grove
McPherrin, Henry I., Des Moines
McQuillen, Charles W., Charles City
★McQuiston, J. Stuart, Cedar Rapids
McTaggart, William B., Havelock
McVay, Melvin J., Lake City
Mead, Frank N., Cedar Falls (L.M.)
Meany, John F., Rockwell
Meents, Diedrich J., Fort Madison
★Meffert, Clyde B., Cedar Rapids
Meggers, Edward C., McGregor
★Megorden, William H., Mount Pleasant
Mehler, Frank R., New London
Melgaard, Bennett A., Sioux City
Mellen, Robert G., Clinton
Mengert, William F., Iowa City
Mercer, Clifford D., West Union (L.M.)
Meredith, Loren K., Des Moines
Mereness, Herbert D., Dolliver
Merkel, Arthur E., Des Moines
★Merkel, Byron M., Des Moines
Merrick, John H., Story City
Merrill, Charles H., Oskaloosa
*Merrill, Nelson, Marshalltown (L.M.)
Merritt, Arthur M., Des Moines
Mershon, Clinton E., Adel (L.M.)
★Meyer, Alfred K., Clinton
Meyer, George R., Marshalltown (L.M.)
★Meyer, Milo G., Marshalltown
Meyers, Frank W., Dubuque
Meyers, Henry A., Davenport
Michel, Bernard A., Dubuque (L.M.)
Mikelson, Clarence J., Iowa City
Miller, Brownlow B., Tabor
Miller, Chester I., Iowa City
★Miller, Donald F., Williamsburg
Miller, Enos D., Wellman
Miller, Johannes J., Ackley
Miller, Lawrence A., North English
★Miller, Oscar H., Estherville
Miller, Temple M., Muscatine
Miller, Wilbur R., Iowa City
Miller, William B., Centerville
Millice, Glenn S., Battle Creek
Mills, Ernest M., LeGrand (L.M.)
Mills, Frank W., Ottumwa
Miltner, Leo J., Davenport
Minassian, Harootune A., Des Moines
Minassian, Thaddeus A., Des Moines
★Miner, James B., Jr., Charles City
Miner, James B., Sr., Charles City (L.M.)
★Missildine, Whitney H., Eagle Grove
Missman, Walter F., Klemme
Mitchell, Claire H., Indianola
★Moen, Harry P., West Union
★Moen, Stanley T., Hartley
★Moerke, Robert F., Burlington
Moershel, Henry G., Homestead
Moes, Matthew J., Dubuque
Mol, Henry L., Grundy Center
Montgomery, Earl C., Atlantic
Montz, Fred, Lowden
Moon, Barclay J., Cedar Rapids
★Mooney, Felix P., Jewell
Mooney, James C., Independence
Moore, Daniel V., Sioux City
★Moore, Edson E., Osage
★Moore, Gage C., Ottumwa
Moore, Harold H., Ottumwa
Moore, Harris C., Melbourne
Moore, Jesse C., Eldon
Moore, Morris, Walnut
Moore, Pauline V., Iowa City
Moorehead, Giles C., Ida Grove (L.M.)
Moorehead, Harold B., Underwood
Moran, Thomas A., Melrose
★Morden, Richard P., Des Moines
Morden, Roy R., Des Moines
Morgan, Earl E., Sioux City
Morgan, Fred B., Clinton
Morgan, Harold W., Mason City
Morganthaler, Otis P., Templeton
★Moriarty, John F., Rock Rapids
★Moriarty, Lauren R., Villisca
Morris, Zenella N., Stockport (L.M.)
Morrison, Edward D., Fort Dodge
★Morrison, John R., Carroll
Morrison, John W., Alta
Morrison, Orry C., Carroll
★Morrison, Roland B., Carroll
Morrison, Wesley J., Cedar Rapids
Morse, Charles H., Eagle Grove (L.M.)
Morton, Elmer E., Des Moines
Morton, Matthew T., Estherville
★Mosher, Martin L., Jr., West Branch
★Moskovitz, Julius M., Council Bluffs
Moth, Robert S., Council Bluffs
Mott, William H., Farmington
Moulton, Milo W., Bellevue
Mountain, Elmer B., Des Moines
Mountain, George E., Des Moines
Mueller, Emil F., Dyersville
Mueller, James A., Fenton
★Mueller, John J., Dubuque
Mucnch, Virgil O., Nichols
★Mugan, Robert C., Sioux City
★Muhs, Emil O., Muscatine
★Mullmann, Arnold J., Adel
Mulsow, Frederick W., Cedar Rapids
Munden, Ralph E., Cedar Rapids

Munger, Elbert E., Spencer
Munger, Elbert E., Jr., Spencer
Murchison, Kenneth, Sidney
★Murphey, Arlo L., Fredericksburg
Murphy, Cornelius B., Alton
Murphy, George C., Waterloo
★Murphy, James H., Des Moines
Murphy, Joseph J., Cedar Rapids
Murray, Frederick G., Cedar Rapids
Murray, Jonathan H., Burlington
Murtaugh, James E., New Hampton
Myers, Edward M., Woodward
Myers, Judson W., Postville
★Myers, Kermit W., Sheldon
★Nagyfy, Stephen F., Iowa City
Nash, Edwin A., Ottumwa
Nauman, Ernest C., Waterloo
Neal, Emma J., Cedar Rapids
Nederhiser, Morgan I., Cascade
★Needles, Roscoe M., Atlantic
Negus, Cora W., Keswick
Nelken, Leonard, Clinton
Nelken, Viola D., Clinton
★Nelson, Arnold L., Des Moines
Nelson, Carrol C., Red Oak
Nelson, Fred L., Ottumwa
★Nelson, Frederick L., Jr., Ottumwa
Nelson, Harry E., Dayton
Nelson, Leo C., Jefferson
Nelson, Paul O., Emmetsburg
Nelson, Robert J., Clinton
Nemec, Joseph J., Cedar Rapids
Nesler, Alfred B., Dubuque
Netolicky, Joseph Y., Solon
★Netolicky, Robert Y., Cedar Rapids
Netolicky, Wesley J., Cedar Rapids
★Neu, Harold N., Sac City
*Neufeld, Frank, Davenport
★Neufeld, Robert J., Davenport
Neuzil, William J., Cedar Rapids
Newell, William C., Ottumwa
Newland, Don H., Belle Plaine
Newland, Elmer R., Drakesville
Newlove, Frank E., Hines, Illinois
Newman, Cloyce A., Bode
★Newman, Robert W., Iowa City
Newport, Pearce E., Clarinda
Newton, Dennis L., Fort Madison
Niblock, George F., Derby
★Nicholson, Clyde G., Spirit Lake
★Nicoll, Charles A., Panora
Nicoll, David T., Mitchellville
Niehaus, Ralph F., San Diego, California
Nielsen, Rudolph F., Cedar Falls
Nielson, Arthur L., Harlan
★Niemann, Theodore V., Brooklyn
★Nierling, Paul A., Cresco
Noble, Earl H., Clemons
Noble, Frederick W., Fort Madison
Noble, Harold F., Fort Madison
Noble, Lloyd E., Rhodes
Noble, Nelle S., Des Moines
★Noble, Rusl P., Cherokee
★Noé, Carl A., Cedar Rapids
Noé, Charles F., Amana (L.M.)
Nomland, Ruben, Iowa City
★Noonan, James J., Marshalltown
Nord, Donald H., Cambridge
★Norment, John E., Clinton
North, Frank R., Winfield
Norton, Alva C., Rockwell City (L.M.)
Norton, Vera V., Waverly
★Noun, Louis J., Des Moines
★Noun, Maurice H., Des Moines
Nourse, Leslie M., Des Moines
Null, Frederick F., Hawarden
Nyquist, David M., Eldora
Nysewander, Christian, Des Moines (L.M.)
Ober, Frank G., Burlington
Obermann, Charles F., Cherokee
O'Brien, Cecil S., Iowa City
O'Brien, Stephen A., Mason City
O'Connor, Edwin C., New Hampton
Odell, Isaac H., Des Moines
O'Donnell, Joseph E., Clinton
O'Donoghue, Arch F., Sioux City
O'Donoghue, James H., Storm Lake
★Oelrich, Carl D., Sioux Center
Oggel, Herman D., Maurice
O'Keefe, John E., Waterloo (L.M.)
★O'Keefe, Paul T., Waterloo
Okerlin, Oscar W., Essex
*Oldag, George C., Paullina
O'Leary, Francis B., George
Olsen, Martin I., Des Moines
Olson, Evelyn M., Winterset
★Olson, Paul F., Dubuque
Olson, Russell L., Northwood
★O'Neal, Harold E., Tipton
★Osborn, Clarence R., Dexter
★Osincup, Paul W., Sioux City
Osten, Burdette H., Northwood
O'Toole, Laurence C., LeMars
*O'Toole, Thomas J., Eagle Grove
Ott, Martin D., Davenport
Otto, Paul C., Fort Dodge
Overton, Lewis M., Des Moines
★Owen, William, Osage
Owen, William R., Osage
Pace, Arthur A., Toledo (L.M.)
Padgham, John T., Grinnell
Page, Addison C., Des Moines (L.M.)
Pagelsen, Otto H., Iowa Falls
Pahlas, Henry M., Dubuque
★Paige, Ralph T., LaPorte City
Painter, Jesse C., Dubuque
★Painter, Robert C., Dubuque
Palmer, Carson W., Guttenberg
Panzer, Edward J. C., Stanton
★Paragas, Modesto R., Creston
★Parish, John R., Grinnell
Parish, Ora F., Grinnell (L.M.)
Park, Elmer R., Sioux City
★Parke, John, Cedar Rapids
Parker, Bernard B., Centerville
Parker, Dean, Iowa City
Parker, Edward S., Ida Grove (L.M.)
Parker, James D., Fayette
Parker, Robert L., Des Moines
★Parkin, George L., Iowa City
Parks, Claude O., Iowa City
Parry, Roy E., Scranton
Parsons, Harry C., Grinnell
Parsons, Irving U., Malvern (L.M.)
Parsons, John C., Des Moines
Parsons, Percival L., Traer
★Paschal, George A., Williams
★Pascoe, Paul L., Carroll
Patterson, Alpheus W., Fonda
Patterson, John N., Burlington (L.M.)
★Patterson, Roy A., Webster City
Paul, John D., Anamosa
Paul, William D., Iowa City
Paulsen, Herbert B., Harris
★Paulus, Edward W., Iowa City
★Paulus, James W., Dubuque
Payne, Rosewell H., Exira
★Pearlman, Leo R., Des Moines
Pearson, George J., Burlington
Pearson, William W., Des Moines
Peart, John C., Davenport
Pease, Herbert, Alta Vista
Peasley, Harold R., Des Moines
Peck, Raymond E., Davenport
★Peek, Levin H., Lake City
★Peisen, Conan J., Des Moines
Pence, James W., Columbus Junction
★Penn, Eugene C., West Des Moines
Pennington, Love E., Independence
Perkins, Franklyn C., Hedrick
Perkins, Rolla W., Sioux City
Perkins, Rollin M., Davenport
Perley, Arthur E., Waterloo
Peschau, Waldo E., Cedar Rapids
Petersen, Emil C., Atlantic
★Petersen, Millard T., Atlantic
★Petersen, Vernon W., Iowa City
Peterson, August J., Forest City
Peterson, Evan A., Burlington
Peterson, Frank R., Iowa City
Peterson, John C., Jr., Hartley
Peterson, Ray W., Clear Lake
Pfannebecker, William, Sigourney (L.M.)
★Pfeiffer, Eric P., Des Moines
Pfeiffer, Ernst, Hartley
Pfeiffer, Harry E., Cedar Rapids
Pfohl, Anthony C., Dubuque
★Phelps, Richard E. H., State Center
Phillips, Albin B., Clear Lake (L.M.)
★Phillips, Allan B., Des Moines
Phillips, Clarence P., Muscatine
Phillips, Isaac H., Missouri Valley
Phillips, Jesse H., Montezuma (L.M.)
Phillips, Norman W., Clear Lake (L.M.)
Phillips, Walter B., Montezuma
Pickard, John C., Dubuque
Piekenbrock, Frank J., Dubuque
Piercy, Kenneth C., Ames
Pierson, Lawrence E., Sioux City
★Plankers, Arthur G., Dubuque
Plass, Everett D., Iowa City
Plimpton, Robert P., Denison
Plummer, George A., Rochester, New York
Poepsel, Frank L., West Point
Pollock, Roscoe, Douds-Leando
Pope, John M., Cherokee
Porstmann, Louis J., Davenport
Porter, Charles E., Redfield
Porter, Clarence M., Woodward
★Porter, Robert J., Des Moines
Porter, Samuel D., Grinnell
Posner, Edward R., Des Moines (L.M.)
Powell, Burke, Albia (L.M.)
★Powell, Lester D., Des Moines
Powell, Robert A., Farragut
Powell, Velura E., Red Oak
Powers, Francis E., Boone
Powers, Harry R., Emmetsburg
Powers, Ivan R., Waterloo
Powers, Joseph C., Hampton
Preece, Wade O., Waterloo
Prentice, George L., Troy
Presnell, J. William, Scranton
Presnell, William H., Charlotte
Prettyman, Oscar R., Manson
★Prewitt, Leland H., Ottumwa
Price, Alfred S., Des Moines
Piessman, Frank A., Keokuk
★Priestley, Joseph B., Des Moines
Pringle, Jesse A., Bagley (L.M.)
★Proctor, Rothwell D., Cedar Rapids
Prouty, James V., Cedar Rapids
★Ptacek, Joseph L., Webster City
★Pumphrey, Loira C., Keokuk
Purcell, Bert E., Iowa Falls
★Purdy, William O., Des Moines
Putnam, Chester L., Des Moines
★Quinn, Francis P., Dubuque
Quire, Frank E., Lynnville
★Ralston, Furman P., Knoxville
Rambo, Cyrus C., Creston
Rambo, David T., Ottumwa
Rambo, Eli F., Webster City
Randall, John H., Iowa City
★Randall, William L., Hampton
Rankin, Isom A., Iowa City
★Rankin, John R., Keokuk
Rankin, William, Keokuk
Ransom, Harry E., Des Moines
★Rarick, Ivan H., Sioux City
Rasmussen, Carl C., Des Moines
Rater, David L., Ottumwa
★Rathe, Herbert W., Waverly
★Rausch, Gerald R., Clarinda
Ravitts, Joseph L., Montezuma
Raw, Elmer J., Pierson
Rawson, Elwin G., Anamosa
★Redmond, James J., Cedar Rapids
Redmond, Thomas M., Monticello
Reed, Andrew I., Estherville
Reed, Guy P., Davis City (L.M.)
Reed, Paul A., Iowa City
Reed, Roe B., Clearfield
Reeder, James E., Sioux City
★Reeder, James E., Jr., Sioux City
Reiley, William S., Red Oak
Reimers, Robert S., Fort Madison
Reimringer, Martin J., Des Moines
Reinicke, Edward L., Dubuque (L.M.)
Reinsch, Frank, Ashton
Render, Norman D., Clarinda
Rendleman, William H., Davenport
Reuber, Roy N., Mason City
Reuling, Frank H., Waterloo
Reutter, Garfield A., Columbus, Kansas
Reynolds, Albert C., Des Moines
Reynolds, Earl O., Greenfield
Rice, Floyd W., Des Moines
Richards, Frank O., Winterset
Richardson, Leon F., Collins
Richmond, Arthur C., Fort Madison
Richmond, Frank R., Fort Madison
★Richmond, Paul C., New Hampton
★Richter, Harold J., Albia
Ridenour, Joseph E., Waterloo
★Riegelman, Ralph H., Des Moines
★Rieniets, John H., Cedar Rapids
Riggert, Leonard O., Clinton
Riggle, Frank P., Fort Madison
Riley, John, Exira (L.M.)
Rimel, George W., Bedford
Ringena, Engelke J., Brooklyn
Ringrose, Edward J., Iowa City
Rinker, George E., Oto
★Ristine, Leonard P., Mount Pleasant
Ritter, John F., Maquoketa
Rizzo, Frank, Sibley
Robb, James B., Chariton
Roberts, Charles R., Dysart
Roberts, Francis L., Spirit Lake
Roberts, Francis M., Knoxville
Roberts, Justus B., Ottumwa
Robertson, Andrew A., Council Bluffs
★Robertson, Treadwell A., West Liberty
Robinson, Robert E., Waverly
★Robinson, Van C., Des Moines
Rock, John E., Davenport
★Rodawig, Donald F., Spirit Lake
Roddy, Harold J., Mason City
Rodemeyer, Frederick H., Sheffield
Roder, Carl F., Dumont
Rodgers, Lewis A., Oskaloosa (L.M.)
Roe, Cullen B., Afton
Rogers, Claude B., Earlville
Rogers, Marion W., Leon
★Rohlf, Edward L., Jr., Waterloo
Rohner, Frank J., Iowa City (L.M.)
Rohrbacher, William M., Iowa City
Rohwer, Roland T., Sioux City

★Rolfs, Floyd O., Parkersburg
Rolfs, Fred A., Aplington
Romine, John H., Stanhope
Rominger, Clark W., Waukon
Roost, Frederick H., Sioux City
Rose, Alvin A., Story City
★Rose, Joseph E., Grundy Center
★Rosebrook, Lee E., Ames
Rosendorff, Charlotte, Bettendorf
Ross, Arthur J., Jr., Perry
★Rotkow, Maurice J., Des Moines
Rowan, Charles J., Beverly Hills, Cal.
Rowat, Harry L., Des Moines
Rowe, Frank N., Denison
Rowley, William G., Sioux City
Royal, Lester A., West Liberty
Royal, Malcolm A., Des Moines
Ruml, Wentzle, Cedar Rapids
Runyon, John H., Seymour
Rusk, Lester D., Sioux City
Russ, Jesse E., Rake
Russell, Edmund D., Fort Dodge
Russell, Elwood P., Burlington
Russell, John, Des Moines
Russell, Ralph E., Waterloo
Rust, Emery A., Webb
Ruth, Verl A., Des Moines
★Ryan, Cyril J., Creston
Ryan, Granville N., Des Moines (L.M.)
★Ryan, Martin J., Sioux City
Saar, Jesse L., Donnellson
Safley, Agnes I., Cedar Rapids
★Sage, Erwin C., Burlington
Sahs, Adolph L., Iowa City
St. Onge, Joseph A., Sioux City
Salisbury, Frederick S., Knoxville
Sampson, Carl E., Creston
Sampson, Frank E., Creston (L.M.)
Sams, Joseph H., Clarion (L.M.)
Samuelson, Carl A., Sheldon
Sanders, George E., Des Moines
Sanders, Matthew G., Fort Dodge
Sanders, William E., Long Beach, Cal.
Sarff, Floyd G., Logan
Sartor, Guido J., Mason City
Sartor, Pierre, Titonka
Sawyer, Grace M., Woodward
Sawyer, Prince E., Sioux City
Sayler, Harley L., Des Moines (L.M.)
Sayre, Ivan K., St. Charles
Scales, Emmet T., Des Moines (L.M.)
Scanlan, George C., DeWitt
Scanlan, Maurice, DeWitt
Scanlon, George H., Iowa City
★Scannell, Raymond C., Carroll
Schaefer, Paul H., Burlington
★Schaeferle, Lawrence G., Gladbrook
Schafer, Leander H., DeWitt
Schanche, Arthur N., Ames
★Scharle, Theodore, Dubuque
Scheele, Matthias H., University City, Mo.
Schenk, Erwin, Des Moines
Schermerhorn, Grace C., Cedar Rapids
Schiff, Joseph, Anita
Schilling, Nicholas, New Hampton
★Schlaser, Verne L., Des Moines
Schmidt, Bernhard H., Davenport (L.M.)
Schmitz, Henry C., Des Moines
Schnug, George E., Dows
Schoon, Harold W., Sibley
Schreiner, Charles A., Ollie
Schroeder, Adrian J., Marshalltown
Schroeder, Frank N., Ryan
Schroeder, Leslie V., Walcott
★Schroeder, Mellgren C., Pella
Schrup, Joseph H., Dubuque (L.M.)
★Schueller, Charles J., Dubuque
Schultz, Albert A., Fort Dodge
Schultz, Ivan T., Humboldt
Schultz, Nelle E. T., Humboldt
★Schwartz, John W., Sioux City
Scott, Philip A., Spirit Lake
Scott, Sophie H., Des Moines (L.M.)
Scott, Walter E., Adel (L.M.)
Seabloom, John L., Red Oak
★Seaman, Charles L., Mount Ayr
Secoy, Frank L., Sioux City
★Sedlacek, Leo B., Cedar Rapids
★Seibert, Cecil W., Waterloo
Seidler, William A., Jamaica (L.M.)
Seiler, Raymond A., Blairstown
Sellards, Joseph W., Clarinda
Sells, Benjamin B., Independence
Sells, Frank W., Osceola
★Sells, Robert L., Jr., Iowa City
★Selman, Ralph J. Ottumwa
Selo, Rudolph A., Hazleton
★Senfeld, Sidney, Belle Plaine
Senska, Frank R., Brandon
Senty, Elmer G., Davenport
Severson, George J., Slater
Shafer, Arthur W., Davenport
Shafer, Lee E., Davenport
★Shane, Robert S., Pilot Mound
Shannon, Edwin R., Waterloo
★Sharpe, Donald C., Dubuque
Shaw, Albert E., Des Moines
★Shaw, David F., Britt
★Shaw, Ernest E., Indianola
Shaw, Mathew M., Madrid
★Shaw, Robert E., Waverly
Shellito, Amos G., Independence (L.M.)
Shelton, Charles D., Bloomfield
Sherbon, Amos, Central City
Sherlock, John H., Larchwood
Sherman, Richard C., Farley
Shine, Dan W., Oelwein
★Shonka, Thomas E., Malvern
★Shope, Charles D., Storm Lake
Shorey, Joseph R., Davenport
★Shrader, John C., Fort Dodge
Shulkin, Samuel H., Sioux City
Shumate, C. Frank, Miles
Siberts, Frank L., Hampton
Sibley, Edward H., Sioux City
Sievers, Claudius L., Denison
Sigworth, Fred B., Anamosa
Simmons, Ralph R., Des Moines
Singer, Siegmund F., Ottumwa
★Sinn, Irvin J., Williamsburg
Sinning, Augustus, Iowa City
★Sinning, John E., Melbourne
Skallerup, Walter M., Walker
★Skultety, James A., Des Moines
*Slavin, Charles T., Moravia
Sloan, Helen M. J., Louisville, Ky.
★Smazal, Stanley F., Davenport
★Smead, Howard H., Des Moines
Smead, Leslie L., Newton
Smiley, Ralph E., Mason City
Smith, Arthur F., Manning
★Smith, Carl W., Dubuque
Smith, Cecil R., Onslow
Smith, Channing G., Granger
★Smith, Elmer M., State Center
★Smith, Eugene E., Waterloo
Smith, Ferdinand J. E., Milford (L.M.)
*Smith, Frank S., Nevada (L.M.)
Smith, Franklin C., Mount Ayr
Smith, Fred M., Iowa City
★Smith, Harold F., Iowa City
Smith, Harry P., Iowa City
★Smith, Herman J., Des Moines
Smith, Homer A., Correctionville
Smith, Howard W., Woodward
Smith, Jason N., Iowa City
Smith, John E., Clarence
Smith, Lawrence D., Des Moines
★Smith, Rex I., Waterloo
★Smith, Robert A., Albia
Smith, Robert T., Granger
★Smith, Roland T., Des Moines
★Smith, Rupard G., Cedar Falls
Smith, Sidney D., Waterloo
Smittle, Jacob M., Waucoma
Smouse, William O., Des Moines (L.M.)
★Smrha, James A., Cedar Rapids
Smythe, Arnold M., Des Moines
Snitkay, Carl J., Belle Plaine
★Snodgrass, Ralph W., Des Moines
★Snyder, Dean C., DeWitt
★Snyder, Glen E., Grimes
Snyder, John A., Roland
Snyder, Raleigh R., Des Moines
Soe, Peder, Kimballton
★Sohm, Herbert A., Des Moines
Sokol, John M., Spencer
*Sollenbarger, George H., Corydon (L.M.)
Sollis, Delmar B., Chariton
Somers, Pearl E., Grinnell (L.M.)
Sones, Clement A., Des Moines
Sorensen, Alfred, Harlan
★Sorensen, Elmer M., Red Oak
★Sorensen, Regnar M., Des Moines
★Sorenson, Aral C., Davenport
Sorenson, Kermit R., Sabula
Soucek, Adolph, Mount Pleasant
Spain, Robert T., Conrad
Sparks, Francis R., Waverly (L.M.)
Spaulding, Homer L., Ankeny
Spear, William M., Oakdale
Spellman, Martin T., Cedar Rapids
★Sperow, Wendell B., Nevada
Sperow, William E., Carlisle
Spilman, Harold A., Ottumwa
Spinharney, Lester J., Cherokee
★Springer, Eugene W., Iowa City
★Springer, Floyd A., Des Moines
Sproul, William M., Des Moines
Stabo, Trond N., Decorah (L.M.)
★Stadler, Harold E., Iowa City
Stafford, James F., Lovilia
★Staggs, William A., Iowa City
Stalford, John H., Sac City (L.M.)
Stam, Nicholas C., Mason City
★Standefer, Joe M., Tama
Stansbury, John E., Cedar Rapids
★Stark, Callistus H., Cedar Rapids
Starr, Charles F., Mason City
Starry, Allen C., Sioux City
★Stauch, Martin O., Whiting
Staudt, Alfred J., Waterloo
★Stearns, A. Bryce, Des Moines
Steele, George H., Belmond
Steelsmith, Frank R., Des Moines
Steenrod, Emerson J., Iowa Falls
★Steffens, Lincoln F., Dubuque
★Steffey, Fred L., Keokuk
★Stegman, Jacob J., Marshalltown
Steindler, Arthur, Iowa City
Steinle, George H., Burlington
Stephen, Paul, Manchester
Stephen, Raymond J., Cedar Rapids
★Stephens, Robert L., Iowa City
Stepp, James K., Manchester
Sternagel, Fred, West Des Moines
Sternberg, Walter A., Mount Pleasant (L.M.)
★Sternhill, Irving, Mason City
★Sternhill, Isaac, Council Bluffs
Stevens, Franklin A., Belmond (L.M.)
Stevens, Harry L., Ottumwa
Stevenson, Eber F., Waterloo (L.M.)
★Stevenson, William W., Rockwell City
Stewart, Alexander P., Inwood
Stewart, Robert A., Independence
Stewart, William L., Mediapolis
Stinson, Alice C., Estherville
Stoakes, Charles S., Lime Springs
Stober, Raymond W., Charles City
Stodden, Frank J., Sioux City
Stoecks, William A., Davenport
Stolley, Jordan G., Moville
Strawn, John T., Des Moines
★Stribley, Harry A., Dubuque
Strohbehn, Edward F., Davenport (L.M.)
Strosnider, Homer O., Keokuk
Stroy, Herbert E., Osceola
★Struble, Gilbert C., Ottumwa
Struck, Kuno H., Davenport
Stuart, Percy E., Nashua
★Stump, Robert B., Iowa City
Stutsman, Eli E., Washington
Suchomel, Thomas F., Cedar Rapids
Sugg, Herbert R., Clinton
★Sulek, Arthur E., Cedar Rapids
Sullivan, Lawrence F., Donahue
Sult, William F., Gilman
★Sulzbach, John F., Oelwein
★Sunderbruch, John H., Davenport
★Svendsen, Reinert N., Decorah
Swab, Charles C., Cedar Rapids
Swallum, James A., Storm Lake
Swallum, Troy W., Spencer
Swan, Kenneth C., Iowa City
Swanson, John E., Sioux City
Swanson, Leslie W., Mason City
★Swift, Charles H., Jr., Marcus
★Swift, Frederick J., Jr., Maquoketa
Swift, Frederick J., Maquoketa
Swinney, Roy G., Richland
Sybenga, Jacob J., Pella
Synhorst, John B., Des Moines
★Sywassink, George A., Muscatine
Tait, John H., Des Moines
Talbott, Eugene F., Grinnell (L.M.)
Talley, Louis F., Marshalltown
★Tamisiea, Francis X., Missouri Valley
Tamisiea, John L., Missouri Valley
★Tandy, Roy W., Morning Sun
Tapper, George W., Monona
Taylor, Charles I., Pomeroy
Taylor, Edward D., Davenport (L.M.)
★Taylor, Ingram C., Fairfield
Taylor, Lawrence A., Ottumwa
Taylor, Maude, Ottumwa
Taylor, Robert S., Davenport
Teufel, John C., Davenport
★Thatcher, Orville D., Fort Dodge
★Thatcher, Wilbur C., Fort Dodge
Thayer, Wilbur F., Ocheyedan
Thein, Garfield M., Oelwein
Theisen, Roy I., Dubuque
Thielen, Edward W., Waterloo
Thielen, Michael H., Grundy Center
Thierman, Edward J., Cedar Falls
Thomas, Clarence I., Guthrie Center (L.M.)
★Thomas, Clifford W., Forest City
Thomas, Clyde E., Keystone
Thomas, Colin G., Monticello
Thomas, Louis A., Red Oak
Thomas, William H., McGregor
★Thompson, Elvin D., Webster City
Thompson, Gilbert N., Jesup
Thompson, Harry F., Forest City (L.M.)
Thompson, Howard E., Dubuque
Thompson, Ira F., Donnellson
Thompson, James R., Waterloo
Thompson, Kenneth L., Oakland

Thompson, Virginia D., Des Moines
Thompson, William L., Bayard (L.M.)
Thoms, Adolph N., Cedar Falls
Thomsen, Thomas F., Red Oak
Thomson, John A., Sioux City
★Thorburn, Orval L., Ames
Thornburg, William V., Guthrie Center (L.M.)
Thornell, Joseph B., Council Bluffs
Thornton, Frank E., Iowa City
Thornton, John W., Lansing
Thornton, Thomas F., Waterloo
Thorson, John A., Dubuque
★Throckmorton, James F., Des Moines
Throckmorton, Jeannette Dean, Des Moines (L.M.)
Throckmorton, Robert F., Des Moines (L.M.)
Throckmorton, Scott L., Chariton
Throckmorton, Tom B., Des Moines
Tice, Claude B., Mason City
Tidball, Charles W., Independence
Tidrick, Robert T., Iowa City
Tilton, John J., Maquoketa
★Tindall, Robert N., Coon Rapids
Tinley, Mary L., Council Bluffs
Tinley, Mathew A., Council Bluffs
★Tinley, Robert E., Council Bluffs
Tinsman, Eugene, Orient
★Titus, Elton L., Iowa City
★Todd, Donald W., Guthrie Center
★Todd, V. Stanley, Eldora
★Tolliver, Hillard A., Charles City
Tombaugh, Frank M., Burlington (L.M.)
Tompkins, Erle D., Clarion
★Toubes, Abraham A., Des Moines
★Tracy, John S., Sioux City
Traister, John E., Eddyville
Trapasso, Tony J., Iowa City
Trey, Bernhard L., Marshalltown
★Treynor, Jack V., Council Bluffs
Trimbo, Joseph H., Chelsea
Tripp, Leroy R., Sioux City
★Trueblood, Clare A., Indianola
★Trunnell, Thomas L., Waterloo
Trussell, Ray E., Iowa City
★Turner, Howard V., Des Moines
Turner, Lee R., Renwick
Turner, William R., Fort Dodge
Tyler, Charles W., Polk City
Tyrrell, Joseph W., Des Moines (L.M.)
Unger, David, Des Moines
Updegraff, Charles L., Boone
Valiquette, Frank G., Sioux City
★Van Besien, George J., Decorah
Van Camp, Thomas H., Breda
Vander Meulen, Herman C., Pella
Vander Stoep, Harry L., LeMars
Van der Veer, Frank L., Janesville
Van Duzer, William R., Casey
Van Epps, Clarence E., Iowa City
★Van Epps, Eugene F., Clinton
Vangsness, Ingmar C., Sioux City
★Van Hale, Laurence A., Des Moines
Van Metre, Paul W., Rockwell City
Van Ness, Charles S., Peterson
★Van Patten, Ernest M., Fort Dodge
Van Tiger, William H., Eldora
★Van Werden, Benjamin D., Keokuk
Van Winkle, Howard L., Cedar Rapids
★Vaubel, Ellis K., Des Moines
Veldhouse, Richard H., Cedar Rapids
★Veltman, John F., Winterset
Venable, George L., New Sharon
Vermeer, Gerritt E., Sheldon
Vernon, Fred G., Jewell
★Vest, William M., Iowa City
Vesterborg, Peder H., Forest City (L.M.)
Victorine, Edward M., Cedar Rapids
Vineyard, Thomas L., Ottumwa
Vinson, Harry W., Ottumwa
Voigt, Ernest J., Burlington
Voigt, Frank O. W., Oskaloosa
Vollmer, Karl, Davenport (L.M.)
von Lackum, Herman J., Dysart (L.M.)
von Lackum, John K., Cedar Rapids
Vorpahl, Rudolph A., Cedar Rapids
Voss, Otto R., Davenport
Waddell, Jesse C., Paton
★Waggoner, Charles V., Clinton
★Wagner, Eugene C., Des Moines
Wagner, James A., Primghar
Wahrer, Frederick L., Marshalltown
Wailes, John W., Davis City (L.M.)
★Wainwright, Maxwell T., Mapleton
Wakeman, Allie H., Fort Dodge
Walker, Benjamin S., Corydon (L.M.)
Walker, Charles C., Des Moines
Walker, Claude M., Kellerton
*Walker, Evon, Ottumwa
Walker, Harry L., Cedar Rapids
Walker, Herbert P., Clarion
Walker, John M., Dubuque
★Walker, Thomas G., Riceville
Walker, Thomas S., Riceville (L.M.)
Wall, David, Ames
Wallace, Robert M., Algona
Wallahan, Jay H., Corning (L.M.)
Walliker, Wilbur M., Clinton
Walsh, William E., Hawkeye
Walston, Edwin B., Des Moines
★Walton, Seth G., Hampton
Walvoord, William W., Dunlap
Wanamaker, Ambrose E., Hamburg (L.M.)
★Wanamaker, Ambrose R., Hamburg
Ward, Dell W., Oelwein
★Ward, Donovan F., Dubuque
Ward, Loraine W., Independence
★Ward, Robert H., Iowa City
Ward, Thomas L., Arnolds Park
Ware, Matt, West Branch
★Ware, Stephen C., Kalona
Warner, Emory D., Iowa City
Warner, Ervin W., Clarion
Warren, Elbert T., Stuart
Waterbury, Charles A., Jr., Waterloo
Waterbury, Charles A., Waterloo
Watkin, Clifford R., Sioux City
Watson, Elbert J., Diagonal (L.M.)
Watters, George H., Des Moines
Watters, Phil G., Des Moines
Watts, A. Fred, Creston
Watts, Clyde F., Marengo
Weaver, Adam, Cumberland
Weaver, Kenneth H., Union
Webb, Daniel R., Jr., Oakdale
Webb, Jonathan W., Bonaparte
Webb, Waterman T., Fairfield
Weber, Frank N., Walnut
Weber, Leslie E., Wapello
Wedel, James R., Keokuk
Weems, Nev E., Paullina
Wehman, Edward J., Burlington
Weih, Elmer P., Clinton
★Weinberg, Harry B., Davenport
Weingart, Julius S., Des Moines
Weir, Edward C., Council Bluffs
Weir, Matt B., Griswold
Weis, Howard A., Davenport
Wells, Benjamin S., Marshalltown
Wells, Fred L., Des Moines (L.M.)
★Wells, Rodney C., Marshalltown
Wendell, Margaret R., Ames
Wentworth, Laydon S., Marble Rock
Wentsler, Norman E., Iowa City
Wentzien, Albert J., Tama
Werndorff, Karl R., Council Bluffs
Werner, Carl A. A., Albert City
Werner, Harold T., Fort Madison
Werts, Charles M., Des Moines
West, Alroy G., Council Bluffs
West, George H., Armstrong
West, Harry D., Des Moines
West, Walter E., Centerville
West, William W., Clarinda
Westerberger, Joseph C., St. Ansgar
★Westly, Gabriel S., Manly
Westly, Soren S., Manly
Weston, Burton R., Mason City
Weston, Robert A., Des Moines
★Wetrich, Max F., Manilla
★Weyer, Joseph J., Lohrville
Whitaker, Ben T., Boone
White, Harold E., Knoxville
White, Paul A., Davenport
White, Seward, Olin
Whitehill, Nelson M., Boone
★Whitehouse, William N., Ottumwa
Whiteis, William R., Iowa City
Whitley, Ralph L., Osage (L.M.)
★Whitmer, Lysle H., Wilton Junction
Whitmire, James E., Sumner
Whitmire, William L., Sumner
★Wicks, Ralph L., Winterset
Wilcox, Delano, Malcom (L.M.)
Wilcox, Edgar B., Oskaloosa
Wilder, Agnes R., Atlantic
Wiley, Ralph E., Fontanelle
★Wilke, Frank A., Woodward
Wilkinson, Levi J., Laurel
★Willett, Wendell M., Des Moines
★Willett, Wilton J., Carbon
Williams, Benjamin G., Oskaloosa
Williams, Edward B., Montezuma (L.M.)
Williams, Edward M., Oskaloosa
Williams, Edward M., Norway
Williams, Frank L., Wadsworth, Kansas
Williams, Frank S., Villisca
Williams, Nathan B., Belle Plaine
★Williams, Robert L., Lakota
Wilson, Fred C., Colesburg
Wilson, Fredric L., Sioux City
★Wilson, Leo L., Sioux City
Winder, Clifford D., Waterloo
Winkler, Frank P., Sibley
Winnett, Edwin B., Des Moines
Wintenburg, Edward J., Delhi
Winter, Louis C., Wilton Junction
Wirsig, Arnold O., Shenandoah
★Wirtz, Dwight C., Des Moines
Wise, James H., Cherokee
★Witte, Herbert J., Marathon
Wolcott, Ruth F., Spirit Lake
Wolf, Henry H., Elgin
Wolf, Joseph, Davenport
Wolfe, Joseph H., Iowa City
Wolfe, Otis R., Marshalltown
★Wolfe, Russell M., Marshalltown
Wolfe, Wilson C., Ottumwa
★Wolfson, Harold, Kingsley
★Wolpert, Paul L., Onawa
Wolverton, Benjamin F., Cedar Rapids
Wood, John R., Wadena
Wood, Rollin W., Newton
Woodard, Floyd O., Des Moines
Woodbridge, James W., Emmetsburg
Woodhouse, George R., Vinton
★Woodhouse, Keith W., Cedar Rapids
Woods, Andrew H., Iowa City
Woods, Arthur D., State Center
Woods, Herbert C., Tama
Woods, Hugh B., Des Moines
Woodward, Lee R., Mason City
★Worley, Charles L., Ottumwa
Wray, Clarence M., Iowa Falls
★Wray, Robert M., Cedar Rapids
Wright, Charles E., Clear Lake
Wright, John R., Las Vegas, New Mexico
Wright, Thomas D., Newton
Wright, Walter N., Rose Hill
Wubbena, Arthur C., Rock Rapids
★Wurl, Otto A., Council Bluffs
Wurtzer, Ezra L., Clear Lake
★Wyatt, Merlin R., Manning
Wyland, Asa O., Underwood (L.M.)
Yancey, Charles C., Sioux City
Yavorsky, George W., Belle Plaine (L.M.)
★Yavorsky, William D., Cedar Rapids
Yocom, Albert L., Chariton
York, Nathan A., Lisbon
Yost, Charles G., Center Point
Young, Clifford W., Onawa
Young, Ernest R., Dubuque
Young, Henry C., Bloomfield (L.M.)
Young, Howard O., Marion
Young, James W., Des Moines
Youtz, Hiram L., Webster City
Zaeske, Dora E. K., Charter Oak
Zaeske, Edward V., Charter Oak
★Zager, Lewis L., Oskaloosa
★Ziffren, Sidney E., Iowa City
Zinn, Edgar N., Fort Dodge
Zoller, Sherwood B., Fredericksburg
Zuercher, Arlo R., Cedar Rapids
★Zukerman, Cecil M., Bettendorf

★Military Service
*Deceased
(L.M.) Life Member

Roster of Iowa Physicians in Military Service

As of June 25, 1943

Adair County

Cornell, D. D., Greenfield (APO 41, San Francisco, Cal.) ..... Capt., A.U.S.
Gantz, A. J., Greenfield (APO Los Angeles, Cal.) .. Capt., A.U.S.

Adams County

Willett, W. J., Carbon (Camp Maxey, Tex.) ..... Capt., A.U.S.

Allamakee County

Hogan, P. W., Waukon
Ivens, M. H., Waukon (Camp Shelby, La.)
Kiesau, M. F., Postville (Jefferson Barracks, Mo.) .. Major, A.U.S.
Rominger, C. R., Waukon (Camp Claiborne, La.) ..... A.U.S.

Appanoose County

Condon, F. J., Centerville (Bethesda, Md.) .... Major, U.S.P.H.S.
Edwards, R. R., Centerville (Trenton, N. J.) ..... 1st Lt., A.U.S.
Huston, M. D., Centerville (Lowry Field, Colo.) .... Capt., A.U.S.

Audubon County

Koehne, F. D., Audubon (Oroville, Wash.)

Benton County

Koontz, L. W., Vinton (Carmel, Cal.) ..... Capt., A.U.S.
Senfeld, Sidney, Belle Plaine

Black Hawk County

Bickley, D. W., Waterloo (Camp Howze, Texas) .... 1st Lt., A.U.S.
Bickley, J. W., Waterloo (Fort Sill. Okla.) ..... 1st Lt., A.U.S.
Butts, J. H., Waterloo (Galveston, Texas) ... Lt. Comdr., U.S.N.R.
Cooper, C. N., Waterloo (Seattle, Wash.) ... Lt. Comdr., U.S.N.R.
Ellyson, C. D., Waterloo (Pensacola, Fla.) ..... Lt., U.S.N.R.
Hartman, H. J., Waterloo (APO 33, Los Angeles, Cal.) ..... Capt., A.U.S.
Henderson, L. J., Cedar Falls (Camp White, Ore.) .. Capt., A.U.S.
Hoyt, C. N., Cedar Falls (McClellan Field, Ala.) 1st Lt., A.U.S.
Ludwick, A. L., Waterloo (APO 813, New York, N. Y.) ..... Capt., A.U.S.
Marquis, F. M., Waterloo (Camp Robinson, Ark.) .. Capt., A.U.S.
O'Keefe, P. T., Waterloo (Nashville, Tenn.) ..... Capt., A.U.S.
Paige, R. T., LaPorte City (Des Moines, Ia.) . Lt. Comdr., U.S.N.R.
Rohlf, E. L., Jr., Waterloo (APO New York, N. Y.) ..... 1st. Lt., A.U.S.
Seibert, C. W., Waterloo (Fort Wright, Wash.) Capt., A.U.S.
Smith, E. E., Waterloo (Scott Field, Ill.) ..... Major, A.U.S.
Smith, R. I., Waterloo (Reno, Nevada) ..... 1st Lt., A.U.S.
Smith, R. G., Cedar Falls (APO 512, New York, N. Y.) ..... Major, A.U.S.
Trunnell, T. L., Waterloo (care P.M., New York, N. Y.) ..... Lt., U.S.N.R.

Boone County

Brewster, E. S., Boone (Camp Chaffee, Ark.) .... Major, A.U.S.
Healy, M. J., Boone
Shane, R. S., Pilot Mound (Des Moines, Ia.) Lt. Col., A.U.S.

Bremer County

Amlie, P. J., Tripoli (Fort Knox, Ky.)
Blum, O. S., Waverly (Bremerton, Wash.) ..... Lt., U.S.N.R.
Rathe, H. W., Waverly (Fort Jackson, S. C.) ..... Capt., A.U.S.
Shaw, R. E., Waverly (Carlisle Barracks, Pa.) .... 1st Lt., A.U.S.

Buchanan County

Barton, J. C., Independence (Camp McCain, Miss.) . Lt. Col., A.U.S.
Hersey, N. L., Independence (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Leehey, P J., Independence (APO 957, San Francisco, Cal.) ..... Capt., A.U.S.
Loeck, J. F., Aurora (Camp Rucker, Ala.) ..... Capt., A.U.S.

Buena Vista County

Almquist, R. E., Albert City (Camp Shelby, Miss.) . Capt., A.U.S.
Brecher, P. W., Storm Lake (Camp White, Ore.) . Lt. Col., A.U.S.
Mailliard, R. E., Storm Lake (APO 254, Los Angeles, Cal.) ..... Major, A.U.S.
Shope, C. D., Storm Lake (Fort Des Moines, Ia.) 1st Lt., A.U.S.
Witte, H. J., Marathon (Omaha, Neb.) ..... Major, A.U.S.

Butler County

Anderson, B. V., Greene (Fleet PO, Seattle, Wash.) .... U.S.N.R.
James, R. A., Allison (Mare Island, Cal.)
Rolfs, F. O., Parkersburg (Springfield, Mo.)

Calhoun County

Grinley, A. V., Rockwell City (APO 507, New York, N. Y.) ..... 1st Lt., A.U.S.
Hobart, F. W., Lake City (Camp Grant, Ill.) .... Capt., A.U.S.
Peek, L. H., Lake City (Jefferson Barracks, Mo.) .. Capt., A.U.S.
Stevenson, W. W., Rockwell City (Port Hueneme Cal.) ..... Lt. Comdr., U.S.N.R.
Weyer, J. J., Lohrville (Camp Carson, Colo.) .... 1st Lt., A.U.S.

Carroll County

Anneberg, A. R., Carroll (Camp Barkeley, Texas)
Anneberg, W. A., Carroll
Cochran, J. L., Carroll (Gulfport, Miss.)
Cross, D. L., Coon Rapids ..... Lt., U.S.N.R.
Freedland, Maurice, Coon Rapids
Morrison, J. R., Carroll (Camp Maxey, Texas) ..... Capt., A.U.S.
Morrison, R. B., Carroll (APO 634, New York, N. Y.) Capt., A.U.S.
Pascoe, P. L., Carroll (Bowman Field, Ky.) ..... Capt., A.U.S.
Scannell, R. C., Carroll (APO, New York, N. Y.)
Tindall, R. N., Coon Rapids
Wyatt, M. R., Manning (Desert Center, Cal.) .... 1st Lt., A.U.S.

Cass County

Egbert, D. S., Atlantic (Fort Snelling, Minn.) Major, A.U.S.
Longstreth, C. M., Atlantic (Norman, Okla) . Lt. Comdr., U.S.N.R.
Needles, R. M., Atlantic (Camp Polk, La.) ..... Capt., A.U.S.
Petersen, M. T., Atlantic (Topeka, Kan.) ..... Capt., A.U.S.

Cedar County

Laughlin, R. M., Tipton (San Diego, Cal.) ..... Lt., U.S.N.R.
Mosher, M. L., West Branch (Camp Gruber, Okla.) ..... Capt., A.U.S.
O'Neal, H. E., Tipton (APO 254, Los Angeles, Cal.) ..... Lt. Col., A.U.S.

Cerro Gordo County

Adams, C. O., Mason City (Brigham City, Utah) ... Capt., A.U.S.
Egloff, W. C., Mason City (Mesa, Ariz.)
Flickinger, R. R., Mason City (Carlisle Barracks, Penn.) ..... 1st. Lt., A.U.S.
Hale, A. E., Dougherty (Camp Hale, Colo.)
Harris, R. H., Mason City (Columbus, Ohio)
Harrison, G. E., Mason City (Boston, Mass.) ..... Col., A.U.S.
Houlahan, J. E., Mason City (Sacramento, Cal.)
Lannon, J. W., Clear Lake (APO 668, New York, N. Y.) ..... Capt., A.U.S.
Long, D. L., Mason City (Santa Ana, Cal.)
Marinos, H. G., Mason City (APO 25, San Francisco, Cal.) ..... Capt., A.U.S.
Sternhill, Irving, Mason City (APO New York, N. Y.)

Cherokee County

Bullock, G. D., Washta (Camp Livingston, La.) .... Capt., A.U.S.
Ihle, C. W., Jr., Cleghorn (Camp San Luis Obispo, Cal.) ..... Major, A.U.S.
Noble, R. P., Cherokee (APO New York, N. Y.) .... Capt., A.U.S.
Swift, C. H., Jr., Marcus (Fort Bliss, Texas) .... Capt., A.U.S.

Chickasaw County

Caulfield, J. D., New Hampton (Denver, Colo.) .... Capt., A.U.S.
Murphey, A. L., Fredericksburg (APO 827, New Orleans, La.) ..... Capt., A.U.S.
O'Connor, E. C., New Hampton (Camp Crowder, Mo.) ..... Capt., A.U.S.
Richmond, P. C., New Hampton (Camp Gruber, Okla.) ..... Capt. A.U.S.

Clay County

Adams, G. W., Royal (Fort Clayton, Panama Canal Zone)
Edington, F. D., Spencer (Lowry Field, Colo.) ..... Col., A.U.S.
Jones, C. C., Spencer (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
King, D. H., Spencer (Spokane, Wash.) ..... Capt., A.U.S.

Clayton County

Anderson, H. M., Strawberry Point (Camp Crowder, Mo.) ..... 1st Lt., A.U.S.
Rhomberg, E. B., Guttenberg (Camp Wallace, Texas) . Capt., A.U.S.

Clinton County

Amesbury, H. A., Clinton (Vancouver, Wash.)
Burke, J. C., Clinton (Laredo, Tex.)
Ellison, G. M., Clinton (Washington, D. C.) ..... 1st Lt., A.U.S.
Hill, D. E., Clinton
King, R. C., Clinton (Camp Chaffee, Ark.)
Lenaghan, R. T., Clinton (Farragut, Idaho)
Meyer, A. K., Clinton (Denver, Colo.)
Norment, J. E., Clinton (Mare Island, Cal.)
Riedesel, E. V., Wheatland (Fort Douglas, Utah)
Snyder, D. C., De Witt
Van Epps, E. F., Clinton (Palm Springs, Cal.) ..... Capt., A.U.S.
Waggoner, C. V., Clinton (Seattle, Wash.) .. Lt. Cmdr., U.S.N.R.

Crawford County

Fee, C. H., Denison (Dunnellon, Fla.) ..... Capt., A.U.S.
Grau, A. H., Denison ..... Lt. Comdr., U.S.N.R.
Maire, E. J., Vail (San Francisco, Cal.)
Wetrich, M. F., Manilla (San Antonio, Tex.)

Dallas-Guthrie Counties

Byrnes, A. W., Guthrie Center (Fort Custer, Mich.) . Major. A.U.S.
Fail, C. S., Adel (Pacific Beach, Wash.) ..... Lt., U.S.N.R.
Margolin, J. M., Perry (Camp Cooke, Cal.) ..... Capt., A.U.S.
McGilvra, R. I., Guthrie Center (San Diego, Cal.) .. Lt., U.S.N.R.
Mullmann, A. J., Adel (Washington, D. C.) ..... Capt., A.U.S.
Nicoll, C. A., Panora (Camp Chaffee, Ark.) ..... Capt., A.U.S.
Osborn, C. R., Dexter (San Francisco, Cal.) .... Lt. (jg), U.S.N.R.
Todd, D. W., Guthrie Center (Camp McCoy, Wis.) ..... 1st Lt., A.U.S.
Wilke, F. A., Woodward (APO 627, New York, N. Y.) ..... 1st Lt., A.U.S.

Davis County

Fenton, C. D., Bloomfield (Carlisle Barracks, Pa.)..Capt., A.U.S.

Decatur County

Doss, W. N., Leon (APO 924, San Francisco, Cal.)
Gamet, E. E., Lamoni (Tacoma, Wash.)

Delaware County

Baumgarten, Oscar, Earlville (APO 307, Los Angeles, Cal.).A.U.S.
Clark, R. E., Manchester (Fort Riley, Kan.)....1st Lt., A.U.S.

Des Moines County

Eigenfeld, M. L., Burlington (Camp Chaffee, Ark.).1st Lt., A.U.S.
Heitzman, P. O., Burlington (Fort Leonard Wood, Mo.)
Jenkins. G. D.. Burlington (West Point, N. Y.)....Lt. Col. A.U.S.
Lohmann, C. J., Burlington (Fort Lewis, Wash.)..Major, A.U.S.
McKitterick, J. C.. Burlington (Davisville, R. I.) .....Lt. Comdr., U.S.N.R.
Moerke, R. F., Burlington (Abilene, Texas).....1st Lt., A.U.S.
Sage, E. C., Burlington.....Lt. Comdr., U.S.N.R.

Dickinson County

Buchanan, J. J., Milford (Fleet PO, New York, N. Y.) .....Lt. Comdr., U.S.N.R.
Henning, G. G., Milford (Camp Adair, Ore.).....Major, A.U.S.
Nicholson, C. G., Spirit Lake (Sawtelle, Cal.).....Capt., A.U.S.
Rodawig, D. F., Spirit Lake (Fort Hancock, N. J.) .. ..Capt., A.U.S.

Dubuque County

Beddoes, M. G., Cascade (Kansas City, Mo.)....Capt., A.U.S.
Conzett, D. C., Dubuque (Fort Riley, Kan.).....Lt. Col., A.U.S.
Cunningham, J. C., Dubuque (Meridian, Miss.) Capt., A.U.S.
Edstrom, Henry, Dubuque (Clinton, Iowa).....Major, A.U.S
Entringer, A. J., Dubuque (APO 41, San Francisco, Cal.) .....Capt., A.U.S.
Hall, C. B., Dubuque (San Antonio, Texas).....1st Lt., A.U.S.
Knoll, A. H., Dubuque (San Francisco, Cal.)....Major, A.U.S.
Langford, W. R., Epworth (APO 948, Seattle, Wash.) .....Capt., A.U.S.
Lavery, H. B., Dubuque (Washington, D. C.)....Lt. Col., A.U.S.
Leik, D. W., Dubuque (Douglas, Ariz.).....1st Lt., A.U.S.
Mueller, J. J.. Dubuque (Hattiesburg, Miss.)....1st Lt., A.U.S.
Olson, P. F., Dubuque (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.
Painter, R. C., Dubuque (care PM, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Paulus, J. W., Dubuque (Camp Merced, Cal.)....1st Lt., A.U.S.
Plankers, A. G., Dubuque (APO New York, N. Y.) Major, A.U.S.
Quinn, F. P., Dubuque (Carlisle Barracks, Penn.).Major, A.U.S.
Scharle, Theodore, Dubuque (Fort Lawton, Wash.) Capt., A.U.S.
Schueller, C. J., Dubuque (APO 3922, New York, N. Y.) .....1st Lt., A.U.S.
Sharpe, D. C., Dubuque (Fort Leonard Wood, Mo.)..Major, A.U.S.
Smith, C. W., Dubuque (Fleet PO, San Francisco, Cal. .....Lt., U.S.N.R.
Steffens, L. F., Dubuque (Camp Chaffee. Ark.)..Lt. Col., A.U.S.
Straub, J. J., Dubuque (care PM, San Francisco, Cal.) .....Lt., U.S.N.R.
Ward, D. F., Dubuque (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.

Emmet County

Clark, J. P., Estherville (Fort Sam Houston, Texas) .....Capt., A.U.S.
Miller, O. H., Estherville (Gowen Field, Idaho) .....Lt. Comdr., U.S.N.R.

Fayette County

Camp, D. E., West Union (Camp Blanding, Fla.)...Capt., A.U.S.
Gallagher, J. P., Oelwein (Camp Elliott, Cal.)....Lt., U.S.N.R.
Henderson, W. B., Oelwein (St. Louis, Mo.).....Major, A.U.S.
Hess, A. M., West Union (Randolph Field, Texas) .....1st Lt., A.U.S.
Moen, H. P., West Union (Camp Barkeley, Texas)..Capt., A.U.S
Sulzbach, J. F., Oelwein

Floyd County

Baltzell, W. C., Charles City (Camp McCoy, Wis.)..Capt., A.U.S.
Flater, N. C., Floyd (Rockford, Ill.).....Capt., A.U.S.
Knight, R. A., Rockford (San Diego, Cal.).....Lt., U.S.N.R.
Mackie, D. G., Charles City (Topeka, Kan.)....1st Lt., A.U.S.
Miner, J. B., Jr., Charles City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Tolliver, H. A., Charles City (San Pedro, Cal.)....Capt., A.U.S.

Franklin County

Byers, W. L., Sheffield (Jefferson Barracks, Mo.).1st Lt., A.U.S.
Hedgecock, L. E., Hampton (care PM, San Francisco, Cal.) .....Lt., U.S.N.R.
Randall, W. L., Hampton (San Diego, Cal.).....Lt., U.S.N.R.
Walton, S. G., Hampton (Camp Robinson, Ark.) 1st Lt., A.U.S.

Fremont County

Kerr, W. H., Hamburg (Camp Phillips, Kan.)....Capt., A.U.S.
Marrs, W. D., Tabor (APO 846, New York, N. Y.) .....1st Lt., A U.S.
Wanamaker, A. R., Hamburg (Los Angeles, Cal.)..Capt., A.U.S.

Greene County

Cartwright, F. P., Grand Junction (Casper, Wyo.) Capt., A.U.S.
Castles, W. A., Jr., Rippey (APO San Francisco, Cal.) .....Capt. A.U.S.
Hanson, L. C., Jefferson (Camp Rucker, Ala.)...1st Lt., A.U.S.
Jongewaard, A. J., Jefferson (St. Louis, Mo.).....U.S.N.R.
Limberg, J. I., Jr., Jefferson (APO San Francisco, Cal.; .....Capt., A.U.S.
Lohr, P. E., Churdan (San Diego, Cal.).....A.U.S.

Grundy County

Rose, J. E., Grundy Center (Norman, Okla.) Lt. Comdr., U.S.N.R.

Hamilton County

Buxton, O. C., Webster City (March Field, Cal.)..1st Lt., A.U.S.
Howar, B. F., Jewell (APO 514, New York, N. Y.) Major, A.U.S.
James, D. W., Kamrar (APO 3792, New York, N. Y.) .....Capt., A.U.S.
Lewis, W. B., Webster City (APO 4500, New York, N. Y.) .....Capt., A.U.S.
Mooney, F. P. Jewell (APO New York, N. Y.)
Paschal, G. A., Williams (Camp Barkeley, Texas)..Capt., A.U.S.
Patterson, R. A., Webster City (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Ptacek, J. L., Webster City (Sheppard Field, Texas)
Thompson, E. D., Webster City (Biloxi, Miss.)..Capt., A.U.S.

Hancock-Winnebago Counties

Dolmage, G. H., Buffalo Center (Nashville, Tenn.)..Capt., A.U.S.
Dulmes, A. H., Klemme (Brigham City, Utah).....Capt., A.U.S.
Eller, L. W., Kanawha (APO 302, New York, N. Y.) .....1st. Lt., A.U.S
Shaw, D. F., Britt (Long Beach, Cal.)
Thomas, C. W., Forest City (Camp Crowder, Mo.)..Capt., A.U.S.

Hardin County

Houlihan, F. W., Ackley (APO 860, New York, N. Y.) .....1st. Lt., A.U.S.
Jansonius, J. W., Eldora (Fort Rosecrans, Cal.)....Capt., A.U.S.
Johnson, R. J., Iowa Falls (Fort Bliss, Texas)..Capt., A.U.S.
Johnson, W. A., Alden (Pendleton, Ore.)
Shurts, J. J., Eldora (Camp Roberts, Cal.).....1st Lt., A.U.S.
Todd, V. S., Eldora (Camp Barkeley, Texas).....1st Lt., A.U.S.

Harrison County

Bergstrom, A. C., Missouri Valley (Ft. Benning, Ga.)....A.U.S.
Burbridge, G. E., Logan (Ft. Benning, Ga.).....Major, A.U.S.
Byrnes, C. W., Dunlap (Jefferson Barracks, Mo.)
Heise, C. A., Jr., Missouri Valley
Tamisiea, F. X., Missouri Valley (Jefferson Barracks, Mo.) .....1st Lt., A.U.S.

Henry County

Brown, W. B., Mount Pleasant (Ft. Devens, Mass.)..Major, A.U.S.
Cogan, Samuel, Mt. Pleasant.....A.U.S.
Dwankowski, Carl, Mt. Pleasant (Carlisle Barracks, Pa.) .....1st. Lt., A.U.S.
Gloeckler, B. B., Mount Pleasant (Laurel, Md.).....Capt., A.U.S.
Hartley, B. D., Mount Pleasant (Yuma, Ariz.)....Capt., A.U.S.
Megorden, W. H.. Mount Pleasant (Ogden, Utah) 1st Lt., A.U.S.
Ristine, L. P., Mount Pleasant (Sioux Falls, S. Dak.) .....Major, A.U.S.

Howard County

Buresh, Abner, Lime Springs (San Diego, Cal.)
Nierling, P. A., Cresco (Camp Polk, La.).....Capt., A.U.S.

Humboldt County

Arent, A. S., Humboldt (Stockton, Cal.).....1st Lt., A.U.S.
Coddington, J. H., Humboldt (Fresno, Cal.).....1st Lt., A.U.S.

Ida County

Dressler, J. B., Ida Grove (Texarkana, Tex.)....1st Lt., A.U.S.
Harris, H. H., Battle Creek (Omaha, Neb.)....1st Lt., A.U.S.
Martin, J. W., Holstein (Montgomery, Ala.).....Capt., A.U.S.

Iowa County

McDaniel, J. D., Marengo (Fort Clark, Texas).. .....A.U.S.
Miller, D. F., Williamsburg (Farragut, Idaho).....Lt., U.S.N.R.

Jackson County

Swift, F. J., Jr., Maquoketa (Camp Atterbury, Ind.) Major, A.U.S.

Jasper County

Doake, Clarke, Newton.....1st Lt., A.U.S.
Minkel, R. M., Newton (APO New York, N. Y.) 1st Lt., A.U.S.
Ritchey, S. J., Newton.....Major, A.U.S.

Jefferson County

Castell, J. W., Fairfield (Fort Devens, Mass.).....Capt., A.U.S.
Gittler, Ludwig, Fairfield (APO 1001, New York, N. Y.) .....Major, A.U.S.
Graber H. E., Fairfield (Carlisle Barracks, Penn.) Major, A.U.S.
Taylor, I. C., Fairfield (Washington, D. C.)....1st Lt., A.U.S.

Johnson County

Agnew, J. W., Iowa City (Camp Phillips, Kan.)..1st Lt., A.U.S.
Allen, J. H., Iowa City (Scott Field, Ill.).....Capt., A.U.S.
Boiler, W. F., Iowa City (Fort Leonard Wood, Mo.) .....Major, A.U.S.
Boyd, E. J., Iowa City (Colorado Springs, Colo.).1st Lt., A.U.S.
Brinkhous, K. M., Iowa City (Fort Houston, Texas) Lt. Col., A.U.S.
Callahan, G. D., Iowa City (El Toro, Cal.).....Lt., U.S.N.R.
Cooper, W. K., Iowa City (Jefferson Barracks, Mo.) Capt., A.U.S.
Crowell, E. A., Iowa City (Spokane, Wash.)..1st Lt., A.U.S.
Diddle, A. W., Iowa City (Key West, Fla.)..Lt. (jg), U.S.N.R.
Dorner, R. A., Iowa City (APO New York, N. Y.).1st Lt., A.U.S.
Elmquist, H. S., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Emmons, M. B., Iowa City (Fort Sam Houston, Texas) .....1st Lt., A.U.S.
Flynn, J. E., Iowa City (Hot Springs, Ark.).....A.U.S.

Fourt, A. S., Iowa City (APO 1001, New York, N. Y.) ..... Col., A.U.S.
Francis, N. L., Iowa City (Annapolis, Md.) Lt. (jg), U.S.N.R.
Galinsky, L. J., Oakdale (Camp Crowder, Mo.) ..... Capt., A.U.S.
Garlinghouse, R. O., Iowa City (Fort Snelling, Minn.) .. A.U.S.
Hardin, R. C., Iowa City (APO 1001, New York, N. Y.) .... A.U.S.
Hartung, Walter, Iowa City (Fort Des Moines, Iowa) .. A.U.S.
Hessin, A. L., Iowa City ..... 1st Lt., A.U.S.
Irwin, R. L., Iowa City (Iowa City, Iowa) .. Lt. Comdr., U.S.N.R.
January, L. E., Iowa City (Davis-Monthan Field, Ariz.) ..... 1st Lt., A.U.S.
Keislar, H. D., Iowa City (Camp Barkeley, Tex.) .. 1st Lt., A.U.S.
Lage, R. H., Iowa City (Santa Barbara, Cal.) ..... Lt., U.S.N.R.
Longwell, F. H., Iowa City (APO 505, New York, N. Y.) ..... Capt., A.U.S.
Nagyfy, S. F., Iowa City (Memphis, Tenn.) ... Lt. (jg), U.S.N.R.
Newman, R. W., Iowa City (Fleet PO, New York, N. Y.) ..... Lt., U.S.N.R.
Parkin, G. L., Iowa City (Carlisle Barracks, Pa.) .. 1st Lt., A.U.S.
Paulus, E. W., Iowa City (APO 1001, New York, N. Y.) ..... Lt. Col., A.U.S.
Petersen, V. W., Iowa City (APO 1001, New York, N. Y.) ..... Col., A.U.S.
Sells, R. L., Jr., Iowa City (Hamilton Field, Cal.) .1st Lt., A.U.S.
Smith, H. F., Iowa City (Great Lakes, Ill.) .Lt. Comdr., U.S.N.R.
Springer, E. W., Iowa City (APO 622, Miami, Fla.) .1st Lt., A.U.S.
Stadler, H. E., Iowa City (Washington, D. C.) .... 1st Lt., A.U.S.
Staggs, W. A., Iowa City (Camp Robinson, Ark.) .. 1st Lt., A.U.S.
Stephens, R. L., Iowa City (Orlando, Fla.) ..... Capt., A.U.S.
Stump, R. B., Iowa City (Fort Leonard Wood, Mo.) .. A.U.S.
Titus, E. L., Iowa City (Fort Wright, N. Y.) .... Col., A.U.S.
Vest, W. M., Iowa City (APO 3671, San Francisco, Cal.) ..... Capt., A.U.S.
Ziffren, S. E., Iowa City (Springfield, Mo.) .... 1st. Lt., A.U.S.

Junior Members

Adams, M. P., Iowa City
Ahrens, J. H., Iowa City (APO San Francisco, Cal.) ..... A.U.S.
Ball, A. L., Iowa City (Camp Polk, La.) ..... Major, A.U.S.
Barrent, M. E., Iowa City (Camp Tyson, Tenn.) .. Capt., A.U.S.
Black, N. M., Iowa City (McChord Field, Wash.) 1st Lt., A.U.S.
Blair, J. D., Iowa City (APO San Francisco, Cal.) .Major, A.U.S.
Boyd, R. J., Iowa City (Spokane, Wash.) ..... Capt., A.U.S.
Brintnall, E. S., Iowa City (Colorado Springs, Colo.) ..... 1st Lt., A.U.S.
Burr, S. P., Iowa City (APO San Francisco, Cal.) .1st Lt., A.U.S.
Connole J. F., Iowa City (Camp Bowie, Texas) .. 1st Lt., A.U.S.
Couch, O. A., Iowa City (Camp Van Dorn, Miss.) .. 1st Lt., A.U.S.
Decker, C. E., Iowa City (Oklahoma City, Okla.) .. 1st Lt., A.U.S.
Donnelly B. A., Iowa City (APO San Francisco, Cal.) ..... 1st Lt., A.U.S.
Ehrenhaft, J. L., Iowa City (March Field, Cal.) .. 1st Lt., A.U.S.
Englerth, F. L., Iowa City (APO San Francisco, Cal.) ..... Capt., A.U.S.
Freiberg, M., Iowa City (Jefferson Barracks, Mo.) ..... A.U.S.
Glassman A. L., Iowa City (Palm Springs, Cal.) 1st Lt., A.U.S.
Gilliland, C. H., Iowa City (Great Lakes, Ill.) Lt. (jg), U.S.N.R.
Hamilton, H. E., Iowa City (Chicago, Ill.) ..... 1st Lt., A.U.S.
Harms, G. E., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Ide, L. W., Iowa City (Fort Warren, Wyo.) ..... 1st Lt., A.U.S.
Jacobs, C. A., Iowa City (APO New York, N. Y.) .Major, A.U.S.
Keil, P. G., Iowa City (Sioux City, Iowa) ..... 1st Lt., A.U.S.
Kelberg, M. R., Iowa City (Treasure Island, Cal.) ..... Lt. (jg), U.S.N.R.
Keleher, M. F., Iowa City (Great Lakes, Ill.) .. Lt. (jg), U.S.N.R.
Keohen, G. F., Iowa City (Camp Grant, Ill.) .... Capt., A.U.S.
Kugler, F. E., Iowa City (Fort Warren, Wyo.) .... Capt., A.U.S.
Lowry, F. C., Iowa City (Sioux Falls, S. D.) .... 1st Lt., A.U.S.
McCann, J. P., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
McQuiston, W. O., Iowa City (Chicago, Ill.) .... 1st Lt., A.U.S.
Moen, B. H., Iowa City
Moon, R. E., Iowa City (Camp Bowie, Texas) .... 1st Lt., A.U.S.
Phillips, R. M., Iowa City (San Francisco, Cal.) 1st Lt., A.U.S.
Pulliam, R. L., Iowa City (Portland, Ore.) ..... Major, A.U.S.
Randall, C. G., Iowa City
Randall, R. G., Iowa City (Waterloo, Iowa) ..... Capt. A.U.S.
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.) ..... 1st Lt., A.U.S.
Russin, L. A., Iowa City (Fort Blanding, Fla.) .... Capt., A.U.S.
Saar, J. L., Iowa City (APO New York, N. Y.) .. Capt., A.U.S.
Sawtelle, W. W., Iowa City
Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Shand, J. A., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Shapiro, S. I., Iowa City
Simpson, F. E., Iowa City (Camp Grant, Ill.) ..... A.U.S.
Skewis, J. E., Iowa City (Rochester, N. Y.) .. Lt. (jg), U.S.N.R.
Skouge, O. T., Iowa City
Towle, R. A., Iowa City (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Warren, R. F., Iowa City (Santa Barbara, Cal.) ..... A.U.S.
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.) ..... 1st. Lt., A.U.S.
Wicks, W. J., Iowa City (Camp Crowder, Mo.) .... Capt., A.U.S.
Williams, L. A., Iowa City (Treasure Island, Cal.) .1st Lt., A.U.S.
Willumsen, H. C., Iowa City (Chico, Cal.) ..... Capt., A.U.S.
Wolkin, J., Iowa City (San Antonio, Texas) .... Capt., A.U.S.
Yetter, W. L., Iowa City (APO New York, N. Y.) Capt., A.U.S.
Zahrt, N. E., Iowa City (Miami Beach, Fla.) .... 1st Lt., A.U.S.
Zimmerman, H. A., Iowa City (Santa Ana, Cal.) .. 1st Lt., A.U.S.

Keokuk County

Bjork, Floyd, Keota (Camp Barkeley, Texas) ..... A.U.S.
Doyle, J. L., Sigourney (Camp Barkeley, Texas) ..... A.U.S.
Engelmann, A. T., What Cheer (Camp Polk, La.) Capt., A.U.S.
Graham, J. A., Gibson (Needles, Cal.) ..... 1st. Lt., A.U.S.
Montgomery, G. E., Keota (Fort Sam Houston, Texas) .... A.U.S.
Wiley, Dudley, Hedrick (Mason City, Wash.)

Kossuth County

Clapsaddle, D. W., Burt (Durham, N. C.) ..... 1st Lt., A.U.S.
Williams. R. L., Lakota (San Diego, Cal.) .. Lt. Comdr., U.S.N.R.

Lee County

Ashline, G. H., Keokuk (Indiantown Gap, Pa.) .... Capt., A.U.S.
Cleary, H. G., Fort Madison (APO 980, Seattle, Wash.)
Cooper, R. E., Keokuk (Fort Leonard Wood, Mo.)
Johnstone, A. A., Keokuk (Camp Robinson, Ark.) .... Col., A.U.S.
McKee, T. L., Keokuk (APO 922, San Francisco, Cal.) ..... Major, A.U.S.
Pumphrey, L. C., Keokuk (Ft. Leonard Wood, Mo.) ..... Major, A.U.S.
Rankin, J. R., Keokuk (Great Lakes, Ill.) ..... Lt., U.S.N.R.
Steffey, F. L., Keokuk (Fort Snelling, Minn.)
Van Werden, B. D., Keokuk (Fort Jackson, S. C.) .. Capt., A.U.S.

Linn County

Andre, G. R., Lisbon (Camp Barkeley, Texas) .... Major, A.U.S.
Berney, P. W., Cedar Rapids (San Francisco, Cal.) Capt., A.U.S.
Block, W. M., Cedar Rapids (Vancouver, Wash.) ... 1st Lt., A.U.S.
Chapman, R. M., Cedar Rapids (Chicago, Ill.) .. 1st Lt., A.U.S.
Coughlan, V. H., Coggon (Fort Snelling, Minn.)
Courter, W. O., Springville (Fort Warren, Wyo.) .... Capt., A.U.S.
Crew, P. I., Marion (Northfield, Vt.) ..... Capt., A.U.S.
Dunn, F. C., Cedar Rapids (Chicago, Ill.) ..... Capt., A.U.S.
Halpin, L. J., Cedar Rapids (Atlanta, Ga.) .... Major, A.U.S.
Hecker J. T., Cedar Rapids (Pecos, Texas) ..... 1st Lt., A.U.S.
Jirsa, H. O., Cedar Rapids (APO 871, New York, N. Y.) ..... Major, A.U.S.
Keith, J. J., Marion (APO 502, San Francisco, Cal.) ..... Capt., A.U.S.
Kieck, E. G., Cedar Rapids (San Diego, Cal.) Lt. Comdr., U.S.N.R.
Kruckenberg, W. G., Mount Vernon (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Locher, R. C., Cedar Rapids (Merced, Cal.) ..... Major, A.U.S.
MacDougal, R. F., Cedar Rapids (Carlisle Barracks, Pa.) ..... Capt., A.U.S.
McConkie, E. B., Cedar Rapids (Sioux Falls, S. Dak.) ..... Major, A.U.S.
McQuiston, J. S., Cedar Rapids (Salina, Kan.) .. Major, A.U.S.
Meffert, C. B., Cedar Rapids (Carlisle Barracks, Pa.) ..... Major, A.U.S.
Netolicky, R. Y., Cedar Rapids (San Francisco, Cal.) .Lt., U.S.N.R.
Noble, W. C., Cedar Rapids (Camp San Luis Obispo, Cal.) ..... 1st. Lt., A.U.S.
Noe, C. A., Cedar Rapids (Hot Springs, Ark.) .. Major, A.U.S.
Parke, John, Cedar Rapids (APO 34, New York, N. Y.) ..... Capt., A.U.S.
Proctor, R. D., Cedar Rapids (Corpus Christi, Texas) ..... Lt. Comdr., U.S.N.R.
Redmond, J. J., Cedar Rapids (APO 813, New York, N. Y.) ..... Major, A.U.S.
Rieniets, J. H., Cedar Rapids (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr, U.S.N.R.
Sedlacek, L. B., Cedar Rapids (Camp Shelby, Miss.) ..... Lt. Col., A.U.S.
Smrha, J. A., Cedar Rapids (Camp Davis, N. C.) .. 1st Lt., A.U.S.
Stark, C. H., Cedar Rapids (Denver, Colo.) ..... Capt., A.U.S.
Sulek, A. E., Cedar Rapids (APO 960, San Francisco, Cal.) ..... Major, A.U.S.
Woodhouse, K. W., Cedar Rapids (APO 34, New York, N. Y.) ..... Lt. Col., A.U.S.
Wray, R. M., Cedar Rapids (APO 958, San Francisco, Cal.) ..... Major, A.U.S.
Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.

Louisa County

DeYarman, K. T., Morning Sun (San Antonio, Texas) ..... 1st Lt., A.U.S.
Tandy, R. W., Morning Sun (Norfolk, Va.) .. Lt. Comdr., U.S.N.R.

Lucas County

Lister, K. E., Chariton (Fort Snelling, Minn.)

Lyon County

Cook, S. H., Rock Rapids (Memphis, Tenn.) ..... Capt., A.U.S.
‡Corcoran, T. E., Rock Rapids (APO New York) N. Y.) ..... Capt. A.U.S.
Moriarty, J. F., Rock Rapids (APO 700, New York, N. Y.) ..... Capt. A.U.S.

Madison County

Boden, H. N., Truro (Fresno, Cal.)
Chesnut, P. F., Winterset (Portland, Ore.) ..... 1st Lt., A.U.S.
Wicks, R. L., Winterset (Portland, Ore.)
Veltman, J. F., Winterset (APO 8883, San Francisco, Cal.) ..... Capt., A.U.S.

Mahaska County

Bennett, G. W., Oskaloosa (Fort Riley, Kan.) .. Major, A.U.S.
Clark, G. H., Oskaloosa ..... Lt. Comdr., U.S.N.R.
Greenlee, M. R., Oskaloosa (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Lemon, K.M., Oskaloosa ..... 1st Lt., A.U.S.
Zager, L. L., Oskaloosa (Camp Rucker, Ala.) .... 1st. Lt., A.U.S.

Marion County

Elliott, V. J., Knoxville (Portland, Ore.).....Capt., A.U.S.
Mater, D. A., Knoxville (Lincoln, Neb.).....Capt., A.U.S.
Ralston, F. P., Knoxville (Indio, Cal.).....Capt., A.U.S.
Schiek, C. M., Knoxville.....Lt. Comdr., U.S.N.R.
Schroeder, M. C., Pella (Camp Uhlan, Texas)....1st Lt., A.U.S.
Williams, D. B., Knoxville.....Capt. A.U.S.

Marshall County

Carpenter, R. C., Marshalltown (APO New York, N. Y.).....Capt., A.U.S.
Marble, E. J., Marshalltown (San Diego, Cal.)....Lt., U.S.N.R.
Marble, W. P., Marshalltown (Walla Walla, Wash.) Capt., A.U.S.
Meyer, M. G., Marshalltown (Camp Polk, La.)....Capt., A.U.S.
Noonan, J. J., Marshalltown (San Diego, Cal.)..Major, A.U.S.
Phelps, R. E., State Center (Fort Cronkhite, Cal.).....1st Lt., A.U.S.
Sinning, J. E., Melbourne (Camp Robinson, Ark.)..Capt., A.U.S.
Smith, E. M., State Center (Sioux City, Ia.).....Lt. Col., A.U.S.
Stegman, J. J., Marshalltown (Portland, Ore.)..Capt., A.U.S.
Wells, R. C., Marshalltown (Gowen Field, Idaho) 1st Lt., A.U.S.
Wolfe, O. D., Marshalltown (Fort Riley, Kan.)..Capt., A.U.S.
Wolfe, R. M., Marshalltown (Cherry Point, N. C.).....Lt. (jg), U.S.N.R.

Mills County

DeYoung, W. A., Glenwood (APO 8857, New York, N. Y.).....Capt., A.U.S.
Magaret, E. C., Glenwood (Lubbock, Texas)....1st Lt., A.U.S.
Shonka, T. E., Malvern (Camp Pickett, Va.).....Capt., A.U.S.

Mitchell County

Culbertson, R. A., St. Ansgar (Fort Knox, Ky.)....Major, A.U.S.
Moore, E. E., Osage (Camp Pickett, Virginia).....Major, A.U.S.
Owen, William, Osage (San Diego, Cal.).....Lt. (jg), U.S.N.R.
Walker, T. G., Riceville (Minneapolis, Minn.).....Lt., U.S.N.R.

Monona County

Almer, L. E., Moorhead (Fort Knox, Ky.).....A.U.S.
Ganzhorn, H. L., Mapleton (Carlisle Barracks, Pa.).....1st. Lt., A.U.S.
Gaukel, L. A., Onawa (APO 937, Seattle, Wash.)..1st Lt., A.U.S.
†Harlan, M. E., Onawa (care PM, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Stauch, M. O., Whiting (Fort Rosecrans, Cal.).....A.U.S.
Wainwright, M. T., Mapleton (APO 939, Seattle, Wash.)..A.U.S.
Wolpert, P. L., Onawa (Rochester, Minn.).....1st Lt., A.U.S.

Monroe County

Heimann, V. R., Albia (Camp Maxey, Texas).....Capt., A.U.S.
Richter, H. J., Albia (Waco, Texas).....Capt., A.U.S.
Smith, R. A., Albia (San Antonio, Texas).....1st Lt., A.U.S.

Montgomery County

Bastron, H. C., Red Oak (APO 525, New York, N. Y.).....Major, A.U.S.
Hansen, F. A., Red Oak (San Diego, Cal.).....Lt., U.S.N.R.
Moriarty, L. R., Villisca (APO 944, Seattle, Wash.).Capt., A.U.S.
Sorensen, E. M., Red Oak (Jefferson Barracks, Mo.).....1st. Lt., A.U.S.

Muscatine County

Ady, A. E., West Liberty (care PM, San Francisco, Cal.)U.S.N.R.
Asthalter, R. W., Muscatine (Fort Meade, Md.)..1st Lt., A.U.S.
Carlson, E. H., Muscatine (Kalamazoo, Mich.)....Capt., A.U.S.
Goad, R. R., Muscatine (Washington, D. C.) Lt. Comdr., U.S.N.R.
Kimball, J. E., Jr., West Liberty (APO Miami, Fla.)
Lindley, E. L., Muscatine (APO Los Angeles, Cal.).Capt., A.U.S.
Muhs, E. O., Muscatine (Camp Claiborne, La.).....Capt., A.U.S.
Norem, Walter, Muscatine (APO Miami, Fla.)....Capt., A.U.S.
Robertson, T. A., West Liberty (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Sywassink, G. A., Muscatine (Camp Campbell, Ky.)Major, A.U.S.
Whitmer, L. H., Wilton Junction (Fort Sill, Okla.).Major, A.U.S.

O'Brien County

Getty, E. B., Primghar (Camp Robinson, Ark.)..1st Lt., A.U.S.
Hayne, W. W., Paullina (APO New York, N. Y.)..1st Lt., A.U.S.
Moen, S. T., Hartley (APO 3492, New York, N. Y.).Major, A.U.S.
Myers, K. W., Sheldon (Watertown, S. Dak.)..1st Lt., A.U.S.

Osceola County

Kuntz, G. S., Sibley (APO 34, New York, N. Y.)

Page County

Barnes, C. A., Shenandoah (Fort Bragg, N. C.)....Capt., A.U.S.
Blackman, Nathan, Shenandoah.....Capt., A.U.S.
Bossingham, E. N., Clarinda (APO 923, San Francisco, Cal.).....Capt., A.U.S.
Bunch, H. Mck., Shenandoah (Farragut, Idaho).....Lt. Comdr., U.S.N.R.
‡Burdick, F. D., Shenandoah (APO, New York, N. Y.).....Capt., A.U.S.
Burnett, F. K., Clarinda (Camp Carson, Colo.)....Major, A.U.S.
Little, E. B., Shenandoah.....1st Lt., A.U.S.
Rausch, G. R., Clarinda (Wendover Field, Utah) 1st Lt., A.U.S.
Savage, L. W., Shenandoah (Fort Meade, Md.)..1st Lt., A.U.S.

Palo Alto County

Davey, W. P., Emmetsburg (San Diego, Cal.) Lt. (jg), U.S.N.R.

Plymouth County

Bowers, C. V., LeMars (Carlisle Barrack, Pa.)...1st Lt., A.U.S.
Foss, R. H., Remsen (Salt Lake City, Utah)..1st Lt., A.U.S.
Wolfson, Harold, Kingsley (Fort Lewis, Wash.)....Capt., A.U.S.

Pocahontas County

Blair, F. L., Jr., Fonda.....1st Lt., A.U.S.
Herrick, T. G., Gilmore City (Los Angeles, Cal.)...Capt., A.U.S.
Larson, J. B., Laurens (Camp Chaffee, Ark.).....1st Lt., A.U.S.
Leserman, L. K., Rolfe (Camp Polk, La.).....1st Lt., A.U.S.

Polk County

Abbott, W. D., Des Moines (Oakland, Cal.)..Lt. Comdr., U.S.N.R.
Anderson, N. B., Des Moines (APO 668, New York, N. Y.).....Lt. Col., A.U.S.
Angell, C. A., Des Moines (Camp Maxey, Texas)....Capt., A.U.S.
Anspach, R. S., Mitchellville (APO 762, New York, N. Y.).....Lt. Col., A.U.S.
Barner, J. L., Des Moines (Atlanta, Ga.)....Major, A.U.S.
Barnes, B. C., Des Moines (Ogden, Utah).....Capt., A.U.S.
Bates, M. T., Des Moines (Fleet PO, New York, N. Y.).....Lt. Comdr., U.S.N.R.
Bender, H. R., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Bond, T. A., Des Moines (Rochester, Minn.)....Lt. (jg), U.S.N.R.
Bone, H. C., Des Moines (Arlington, Cal.).....Capt., A.U.S.
Brown, A. W., Des Moines (Fort Leavenworth, Kan.).....Capt., A.U.S.
Bruner, J. M., Des Moines (Fort Bliss, Texas)....Major, A.U.S.
Bruns, P. D., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
‡Burgeson, F. M., Des Moines (Am. P.O.W. 4372, Oflag, 9 A/Z, Germany.....Capt., A.U.S.
Caldwell, J. W., Des Moines (Vulcan, Alberta, Canada).....Flight Lt., R.C.A.F.
Chambers, J. W., Des Moines (Fort Riley, Kan.)..1st Lt., A.U.S.
Chase, W. B., Jr., Des Moines (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.
Clark, G. E., Jr., Des Moines (Randolph Field, Texas).....1st Lt., A.U.S.
Connell, J. R., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Corn, H. H., Des Moines (St. Louis, Mo.).....1st Lt., A.U.S.
Coughlan, D. W., Des Moines (Camp Gruber, Okla.) Capt., A.U.S.
Crowley, D. F., Jr., Des Moines (APO New York, N. Y.).....Capt., A.U.S.
Crowley, F. A., Des Moines (APO New York, N. Y.).....1st Lt., A.U.S.
DeCicco, Ralph, Des Moines (APO Los Angeles, Cal.).....Capt., A.U.S.
Decker, H. G., Des Moines (Long Beach, Cal.)....Lt., U.S.N.R.
Downing, A. H., Des Moines (Fort Snelling, Minn.).....1st Lt., A.U.S.
Dushkin, M. A., Des Moines (Fort Huachuca, Ariz.).....Capt., A.U.S.
Elliott, O. A., Des Moines (Pecos, Texas).....1st Lt., A.U.S.
Ellis, H. G., Des Moines (Kearney, Nebr.).....Capt., A.U.S.
Ervin, L. J., Des Moines (Fort Clark, Texas)....Major, A.U.S.
Fried, David, Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Fracasse, John, Des Moines.....1st Lt., A.U.S.
George, E. M., Des Moines (Camp Dodge, Iowa).....Lt. Comdr., U.S.N.R.
Gerchek, E. W., Des Moines
Gibson, D. N., Des Moines (Carlisle Barracks, Pa.).Major, A.U.S.
Goldberg, Louie, Des Moines (Randolph Field, Texas).....1st Lt., A.U.S.
Gordon, A. M., Des Moines (Fort Ord, Cal.)....Capt., A.U.S.
Graeber, F. O., Des Moines (Aberdeen, S. Dak.)..1st Lt., A.U.S.
Greek, L. M., Des Moines (Camp Crowder, Mo.)..1st Lt., A.U.S.
Gurau, H. H., Des Moines (Portland, Ore.)....1st Lt., A.U.S.
Haines, D. J., Des Moines (Denver, Colo.).....Capt., A.U.S.
Harris, D. D., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Harris, H. L., Des Moines.....1st Lt., A.U.S.
Hess, John, Jr., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
James, A. D., Des Moines (Fleet PO, San Francisco, Cal.).....Comdr., U.S.N.R.
Johnston, C. H., Des Moines (APO 639, New York, N. Y.).....Lt. Col., A.U.S.
Kast, D. H., Des Moines (Fort Stevens, Ore.).....Capt., A.U.S.
Kelley, E. J., Des Moines (Kansas City, Mo.).....Lt. Comdr., U.S.N.R.
Kelly, D. H., Des Moines (Denver, Colo.).....Lt. Col., A.U.S.
Klocksiem, H. L., Des Moines.....Lt. (jg), U.S.N.R.
Kottke, E. E., Des Moines (Temple, Texas).....Capt., A.U.S.
Landis, S. N., Des Moines (West Palm Beach, Fla.).....1st Lt., A.U.S.
La Tona, Salvatore, Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Lederman, James, Des Moines.....1st Lt., R.C.A.
Lehman, E. W., Des Moines (Memphis, Tenn.)....Major, A.U.S.
Lovejoy, E. P., Des Moines (Mare Island, Cal.).....Lt. Comdr., U.S.N.R.
Maloney, P. J., Des Moines (Fort Lewis, Wash.)...1st Lt., A.U.S.
Marquis, G. S., Des Moines (Chicago, Ill.)..Lt. Comdr., U.S.N.R.
Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.
Mauritz, E. L., Des Moines (APO 700, New York, N. Y.).....1st Lt., A.U.S.
McCoy, H. J., Des Moines (Iowa City, Iowa)...Comdr., U.S.N.R.
McDonald, D. J., Des Moines (March Field, Cal.).Capt., A.U.S.
McNamee, J. H., Des Moines (Oakland, Cal.).....Lt. Comdr., U.S.N.R.
Mencher, E. W., Des Moines.....1st Lt., A.U.S.
Merkel, B. M., Des Moines (Colorado Springs, Colo.).....Major., A.U.S.
Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.).....Capt., A.U.S.

Morden, R. P., Des Moines (APO 4570, New York, N. Y.) ..... 1st Lt., A.U.S.
Murphy, J. H., Des Moines (San Diego, Cal.) ..... Lt., U.S.N.R.
Nelson, A. L., Des Moines (Camp Livingston, La.) Capt., A.U.S.
Noun, L. J., Des Moines (Fleet PO, New York, N. Y.) ..... Lt. (jg), U.S.N.R.
Noun, M. H., Des Moines (APO 871, New York, N. Y.) ..... Major, A.U.S.
Nourse, M. H., Des Moines (Bethesda, Md.) .. Lt. (jg), U.S.N.R.
Patton, B. W., Des Moines (Camp Robinson, Ark.) ..... 1st Lt., A.U.S.
Pearlman, L. R., Des Moines (APO Seattle, Wash.) ..... 1st Lt., A.U.S.
Peisen, C. J., Des Moines (Camp Perry, Obio) .. 1st Lt., A.U.S.
Penn, E. C., West Des Moines (Spokane, Wash.) ..... 1st Lt., A.U.S.
Pfeiffer, E. P., Des Moines (Springfield, Mo.) .... Capt., A.U.S.
Phillips, A. B., Des Moines (Corpus Christi, Texas) ..... Lt., U.S.N.R.
Porter, R. J., Des Moines (Sioux City, Iowa) ..... 1st Lt., A.U.S.
Powell, L. D., Des Moines (Long Beach, Cal.) ... Comdr., U.S.N.R.
Pratt, E. B., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Priestley, J. B., Des Moines (Camp Phillips, Kan.) .. Major, A.U.S.
Purdy, W. O., Des Moines (Camp Howze, Texas) .. Capt., A.U.S.
Riegelman, R. H., Des Moines (APO 634, New York, N. Y.) ..... Major, A.U.S.
Robinson, V. C., Des Moines (Tampa, Fla.) .... Capt., A.U.S.
Rotkow, M. J., Des Moines (Louisville, Ky.) .... 1st Lt., A.U.S.
Schaeferle. M. J., Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Schlaser, V. L., Des Moines (New River, N. C.) .... Lt., U.S.N.R.
Shepherd, L. K., Des Moines (APO New York, N. Y.) ..... 1st Lt., A.U.S.
Shifler, H. K., Des Moines (APO New York, N. Y.) .Capt., A.U.S.
Singer, P. L., Des Moines (Camp Grant, Ill.) .. 1st Lt., A.U.S.
Skultety, J. A., Des Moines (Brownsville, Texas) ..... 1st. Lt., U.S.P.H.S.
Smead, H. H., Des Moines (Randolph Field, Texas) .. Capt., A.U.S.
Smith, H. J., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Smith, R. T., Des Moines (Meridian, Miss.) .... 1st Lt., A.U.S.
Snodgrass, R. W., Des Moines (Fort Rosecrans, Cal.) ..... Capt., A.U.S.
Snyder, G. E., Grimes (Camp Robinson, Ark.) ..... Major, A.U.S.
Sohm, H. A., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Sorensen, R. M., Des Moines (Topeka, Kan.) .Major, U.S.P.H.S.
Springer, F. A., Des Moines (Treasure Island, Cal.) ..... Lt. Comdr., U.S.N.R.
Stearns, A. B., Des Moines (Denver, Colo.) .. Major, A.U.S.
Stickler, Robert, Des Moines (Fort Benning, Ga.) 1st. Lt., A.U.S.
Stitt, P. L., Des Moines (Seattle, Wash.) .... Lt. (jg), U.S.N.R.
Throckmorton, J. F., Des Moines (Camp Howze, Texas) ..... Capt. A.U.S.
Toubes, A. A., Des Moines (Greenville, Miss.) .. 1st Lt., A.U.S.
Turner, H. V., Des Moines (Tyler, Texas) ..... 1st Lt., A.U.S.
Updegraff, Tbomas, Des Moines (Spokane, Wash.) .1st Lt., A.U.S.
Van Hale, L. A., Des Moines (Transfer, Penn.) .... 1st Lt., A.U.S.
Vaubel, E. K., Des Moines (Portland, Ore.) ..... Capt., A.U.S.
Wagner, E. C., Des Moines (Washington, D. C.) .. 1st Lt., A.U.S.
Willett, W. M., Des Moines (Fort Bragg, N. C.) .. 1st Lt., A.U.S.
Wirtz, D. C., Des Moines (Great Lakes, Ill.) .. Lt. Comdr., U.S.N.R.
Zarchy, A. C., Des Moines (Camp Cook, Cal.) ..... Capt., A.U.S.

Pottawattamie County

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Cogley, J. P., Council Bluffs (Fort Ord, Cal.) .... Major., A.U.S.
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Dean. A. M., Council Bluffs (Pensacola, Fla.) ..... Lt. Comdr., U.S.N.R.
Hennessy, J. D., Council Bluffs (Chicago, Ill.) .. Lt., U.S.N.R.
Jensen, A. L., Council Bluffs (APO 452, San Francisco, Cal.) ..... Lt. Col., A.U.S.
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Maiden, S. D., Council Bluffs (San Francisco Cal.) ..... Major, A.U.S.
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Sternbill, Isaac, Council Bluffs (APO 3552, Seattle, Wash.) ..... Capt., A.U.S.
Tinley, R. E., Council Bluffs (APO New York, N. Y.) ..... Capt., A.U.S.
Treynor, J. V., Council Bluffs (South Bend, Ind.) ..... Lt. Comdr., U.S.N.R.
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Poweshiek County

Brobyn, T. E., Grinnell (Fort Ord, Cal.) ..... Capt., A.U.S.
Hickerson, L. C., Brooklyn (Oxnard, Cal.) ..... 1st. Lt., A.U.S.
Korfmacher, E. S., Grinnell (San Francisco, Cal.) ..... Capt., A.U.S.
Niemann, T. V., Brooklyn (Camp Shelby, Miss.) ..... 1st Lt., A.U.S.
Parish, J. R., Grinnell (Treasure Island, Cal.) ..... Lt. Comdr., U.S.N.R.

Ringgold County

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Evans, W. I., Sac City (Camp Hood, Texas) ..... Capt., A.U.S.
Klocksiem, R. G., Odebolt (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Neu, H. N., Sac City (Portland, Ore.) ..... Major, A.U.S.

Scott County

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Balzer, W. J., Davenport (APO Seattle, Wash.) .. 1st Lt., A.U.S.
Bishop, J. F., Davenport (APO 972, Seattle, Wash.) ..... 1st Lt., A.U.S.
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Oelrich, A. M., Hull (Carlisle Barracks, Pa.) .... 1st. Lt., A.U.S.
Oelrich, C. D., Sioux Center (Carlisle Barracks, Pa.) ..... 1st Lt., A.U.S.

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McFarland, J. E., Ames (Farragut, Idaho) .. Lt. Comdr., U.S.N.R.
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Standefer, J. M., Tama (San Diego, Cal.)

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Hardin, J. F., Bedford (Fort Leonard Wood, Mo.)

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Shaw, E. E., Indianola (Ancon, Canal Zone) ..... Capt., A.U.S.
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Mast, T. M., Washington (Portland, Ore.) ..... Lt. U.S.N.R.
Stutsman, R. E., Washington (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
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Burroughs, H. H., Sioux City ..... Lt. (jg), U.S.N.R.
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Dimsdale, L. J., Sioux City (Clinton, Iowa) ..... 1st Lt., A.U.S.
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Frank, L. J., Sioux City (Mare Island, Cal.) . Lt. Comdr., U.S.N.R.
Graham, J. W., Sioux City (San Diego, Cal.) . Lt. Comdr., U.S.N.R.
Grossman, Milton, Sioux City (Hobbs, N. M.) .. Capt., A.U.S.
Heffernan, C. E., Sioux City (Salt Lake City, Utah) ..... 1st Lt., A.U.S.
Hicks, W. K., Sioux City (Fort Riley, Kan.) .. Major, A.U.S.
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Kaplan, David, Sioux City (Fort Bragg, N. C.) .. 1st Lt., A.U.S.
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Krigsten, W. M., Sioux City (Springfield, Mo.) .. Lt. Col., A.U.S.
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Mattice, L. H., Danbury (APO 4580, San Francisco, Cal.) ..... 1st Lt., A.U.S.
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Wilson, L. L., Sioux City (Camp San Luis Obispo, Cal.) ..... Capt., A.U.S.

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Wright County

Aageson, C. A., Dows
Bird, R. G., Clarion (San Diego, Cal.) ..... Lt. Comdr., U.S.N.R.
Doles, E. A., Clarion (Phoenix, Ariz.)
Leinbach, S. P., Belmond (Farragut Air Base, Idaho)
Missildine, W. H., Eagle Grove (APO 25, San Francisco, Cal.) ..... Capt., A.U.S.

(*) Reported missing in action.
(†) Reported killed in action.
(‡) Reported prisoner of war.

ROSTER OF FIFTY-YEAR CLUB MEMBERS

Below is the roster of the physicians in Iowa who are members of the Fifty-Year Club of the Iowa State Medical Society. It is not given to many of us to achieve this mark, and we honor those who do. We know our readers will be interested in seeing how many doctors have served their communities so long, and we are happy to take this occasion to pay tribute to these men.

Beam, Watson W., Rolfe
Beveridge, Thomas F., Muscatine
Bierring, Walter L., Des Moines
Boody, George, Independence
*Bower, Edward L., Guthrie Center
Boyd, Frank E., Colfax
Brown, Eric N., Marengo
Brubaker, John F., Hubbard
Burbank, Frank E.. Pleasantville
Carson, Andros, Des Moines
*Clarke J. Fred, Fairfield
Cole, Elmer J., Woodbine
*Davisson, Robert R., Winterset
Dennison, John C., Bellevue
Dittmer, Martin E., Colesburg
Donelan, James M., Glenwood
Downing, William L., Moulton
Evans, John G., New Hartford
Fowler, Charles C., Lovilia
Geeseka, Otto A., Mount Pleasant
Gray, Samuel T., Albia
Hamilton, Benjamin C., Sr., Jefferson
Heady, Conda C. C., Bloomfield
Howard, Fred H., Strawberry Point
*Hurd, Charles A., Northwood
Huston, Herbert M., Ruthven
Jepson, William, Sioux City
Johnson, Albert P., Sigourney
Kerlin, Jared D., Shenandoah
*Kessler, John B., Cedar Rapids
Kriebs, Frank J., Elkport
Ladd, Fred G., Cedar Rapids
Lease, Nimrod J., Crawfordsville
*Lessenger, William S., Mount Pleasant
Linn, Ellis G., Des Moines
Loose, David N., Maquoketa
*Maloney, Arthur P., Fonda
Marsh, William E., Eldora
Mason, Stella M., Mason City
McDannell, John, Nashua
*Merrill, Nelson, Marshalltown
Michel, Bernard A., Dubuque
Miller, Charles W.. Preston
Mills, Ernest M., LeGrand
Minassian, Harootune A., Des Moines
Moorehead, Giles C., Ida Grove
Morse, Charles H., Eagle Grove
Newland, Mark A., Center Point
Nicoll, David T., Mitchellville
Nysewander, Christian, Des Moines
Parker, James D., Fayette
Parsons, Irving U., Malvern
Patterson, John N., Burlington
Pfannebecker, William, Sigourney
Phelps, Myron H., Van Wert
Phillips, Norman W., Clear Lake
Presnell, J. William, Scranton
Quire, Frank E. Lynnville
Riley, John, Exira
Ruml, Wentzle, Cedar Rapids
Runyon, John H., Seymour
Sams, Joseph H., Clarion
Sanders, William E., Des Moines
Scott, Sophie H., Des Moines
Scott, Walter E., Adel
Shellito, Amos G., Independence
Smith, Ferdinand J. E., Milford
*Smith, Frank S., Nevada
*Spilman, Smith A., Ottumwa
Stevens, Franklin A., Belmond
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Throckmorton, R. Fred, Des Moines
Tyler, Charles W., Polk City
*VanAusdall, Garrett M., New London
Vance, Frederick E., Eddyville
Vollmer, Karl, Davenport
von Lackum, Herman J., Dysart
Wailes, John W., Davis City
Walsh, Thomas N., Hawkeye
Walston, Edwin B., Des Moines
Walter, August F., Gladbrook
Wells, Fred L., Des Moines
Woods, Harry E., Birmingham
Young, Henry C., Bloomfield

*Deceased

The JOURNAL
of the
Iowa State Medical Society

VOL. XXXIII DES MOINES, IOWA, AUGUST, 1943 No. 8

PELVIC SURGERY AS RELATED TO GENERAL PRACTICE*

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I wish to discuss certain phases of conditions among women that are directly concerned with the physician in general practice rather than those phases which may be considered in the domain of the specialist. I am doing this chiefly because the majority of patients consult their family physician first for advice and treatment. Some of these conditions are surgical and some are not.

BLEEDING

The first condition I have in mind is irregular uterine bleeding and unusual vaginal spotting. It is the group of patients who have these symptoms that usually delays in seeking medical advice, except when such condition occurs after the menopause. For some unknown reason the laity regards abnormal bleeding and spotting as being insignificant or attributable to strain resulting from heavy work or to changes of atmospheric temperature. If we as physicians are going to reduce the mortality rate for malignant lesions of the female generative organs, it is essential that we have the opportunity to see these patients at the very onset of the trouble. It is the general practitioner, not the gynecologist, who is going to see them. It naturally follows, then, that if the patient does present herself for examination and advice, one assumes a tremendous responsibility if one prescribes various proprietary medicines as a corrective procedure instead of satisfying oneself of the true cause of the irregularity.

One may assume that irregularity occurring in the third and fourth decades of life, if not due to pregnancy, either uterine or ectopic, or to incomplete abortion, is most likely due to faulty ovarian function. However, that point must be proved. If the Friedman test gives negative results and curettage does not reveal any retained membranes, then the endometrium may reveal those changes which are associated with ovarian dysfunction. If the latter is proved to be the diagnosis, appropriate treatment can be instituted. It seems to me the advantage of diagnostic curettage and bimanual examination with the patient under anesthesia is tremendously important in this entire group of cases, no matter in what decade of life the condition exists. Chiefly, this procedure gives one the opportunity to prove or disprove the presence of carcinoma of the cervix or of the fundus or any unusual pathologic condition of the adnexal regions. In some cases it is unwise indeed to give advice on the basis of a pelvic examination without subjecting the patient to anesthesia.

I wish to stress the importance of carcinoma of the cervix in situ and of carcinoma appearing on a uterine polyp. Both of these conditions are curable if discovered in time. It has been estimated by good and recognized authorities that carcinoma of the cervix remains in situ many months before it begins its invasive process. In all these cases, therefore, the condition can be cured surgically by total removal of the uterus but cannot be cured by such a procedure after invasion has begun. I have observed several instances of carcinoma appearing on the base of a uterine polyp, and these also are curable if discovered early. A malignant lesion which occurs on a uterine polyp is usually much more malignant than the usual carcinoma of the fundus. Not all polyps of the fundus of the uterus become malignant, but it is a bad disease and the polyps should be removed, or at least one should be aware of their presence by curettage. Polyps here in this organ are not different from polyps in the stomach or in the colon. They practically all become malignant if the patient lives long enough. A polyp in the colon which once begins to bleed must be regarded as possibly undergoing malignant change. The same thing is true of a large uterine polyp which begins to produce irregular bleeding.

*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.
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Occasionally one or two small intramural fibroids which produce disturbance of the mucosa will produce irregular bleeding, but this is not the rule. A simple curettage in this instance may relieve the irregularity from one to three years, and the condition does not call for immediate hysterectomy or myomectomy. A myoma that produces distortion or projects into the uterine cavity can cause considerable disturbance of the menses, and if it occurs in a woman less than forty years of age it deserves myomectomy. If the uterus contains multiple small seedling fibroids, a better procedure would be hysterectomy, since myomectomy performed on a patient less than forty years of age has an incidence of recurrence of 20 per cent.

Diseases of the adnexa may cause irregular bleeding and spotting and in doubtful cases this should be determined by bimanual examination with the patient under anesthesia. I do not wish to review the numerous diseased conditions of the adnexa which can produce uterine bleeding but only emphasize the importance of examination with the patient under anesthesia to determine the mobility of the adnexa and the uterus so that one can advise the young patient more carefully as to what it might be necessary to remove at the time of operation.

BACKACHE

Backache, I believe, is one of the most common complaints among women and it invariably is attributed to the generative organs. It is assumed that they do not work properly, that they are out of position, or that they are overfunctioning. Rarely is backache due to any of the three, except in a very small percentage of cases which I wish to enumerate. Extensive cervicitis will result in low back pain by virtue of the fact that the lymphatics of the cervix extend backward along the uterosacral ligaments, upward and toward the urethra. Infection, therefore, in the pelvis will extend along these lymphatic channels and one can find edema in the broad ligaments and the uterosacral ligaments and perhaps some increased fluid in the cul-de-sac of Douglas. In these instances the pain should not be attributed to malposition of the uterus. Conservative therapy in the office, such as cautery, local treatment, and application of heat in various forms, will give astonishing results. Too often in this group of cases patients are subjected to an internal shortening and appendectomy. Fixation of the uterus in the cul-de-sac as observed in chronic pelvic inflammatory disease or as the result of pelvic peritonitis following appendicitis, or fixation which may occur from diverticulitis of the sigmoid colon with infection, will produce considerable backache and these conditions are subject to surgical correction.

I mention these in particular to point out the fact that the uterus which is freely movable rarely needs any surgical correction, although it may be found in a posterior position at most examinations. Various degrees of uterine prolapse, cystocele, or rectocele may produce a low back discomfort, but among this group of younger patients particularly, the backache should not be attributed to the prolapse at all. It is important to discuss this phase of the patient's complaint before any attempt at plastic operations is undertaken and to state that the backache may not be corrected by operation. As a specific example, I saw a patient a couple of years ago at fifty-five years of age who had a complete prolapse of the uterus and bladder which she had had for twenty-five years, but she did not seek my advice on account of this condition. This was discovered on routine examination, and after most careful questioning the patient did not admit that she had one bit of discomfort from the prolapse and cystocele. It, therefore, follows after such an experience that one should be extremely cautious about the repair of cystocele and rectocele of moderate degree with the expectation that one is going to cure all the various female pelvic disorders.

VAGINAL PLASTIC OPERATIONS

This statement naturally brings us to a discussion of the great field of vaginal plastic surgery with all of its variations and descriptions. Obviously it would not be desirable at this time to go into the technical details of these many procedures, but what does seem important to me is to emphasize that it is the responsibility of the general practitioner to ferret out the case in which the patient is going to be definitely benefited by vaginal plastic operations or by vaginal hysterectomy and repair. It seems to me that a satisfactory way is to draw the dividing line between those patients less than forty years of age and those more than forty years of age. The number of young people who actually require repair of a cystocele and rectocele on account of definite symptoms is rather small and those who do require it usually have moderate prolapse and some urinary incontinence, or have sustained a complete laceration of the perineum with incontinence of the rectal sphincter.

After forty years of age, and especially if ovarian failure due to the menopause is becoming evident, a great percentage of patients will begin to have discomfort from cystocele, rectocele, and prolapse because of the fact that atrophy of the pelvic supporting fascia is taking place. Also, after forty years of age removal of the uterus, either abdominal or vaginal, is indicated more frequently than earlier. Therefore, it seems to me

that patients who have symptomless cystoceles and rectoceles before forty years of age should be advised to carry on to near the menopause when they may have a permanent operation such as that which might require the removal of the uterus. Patients as a rule are not fond of multiple operations over a period of years and they are delighted if they can be saved from an operative procedure that need not be 100 per cent necessary. In this connection vaginal hysterectomy is becoming a more satisfactory procedure than the intra-uterine use of radium for irregular bleeding not due to fibroids or adnexal disease at the menopause, especially if some vaginal plastic work is indicated.

ABDOMINAL HYSTERECTOMY

The majority of surgeons in general practice do their own pelvic operations. That is as it should be, except in unusual conditions and circumstances which should be recognized by the individual surgeon himself. The mortality rate in average pelvic operations is low. One can say it will average from 10 per cent to 0.5 per cent, depending on the skill of the surgeon, the pathologic condition, the difficulties encountered in the operation, and the physical condition of the patient.

With moderate care subtotal hysterectomy can be performed with a risk of 1 or 2 per cent, but I believe that subtotal hysterectomy should not be done if total hysterectomy is indicated definitely. Therefore, it is necessary for the general surgeon to be thoroughly familiar with the procedure of total hysterectomy and to know in which cases it is most advisable to apply this procedure. It is logical to state that a diseased cervix should not be left in position unless there is less mobility of the lower uterine segment. The more diseased cervices usually occur in multiparous patients. A more satisfied patient will be obtained by a properly mobilized vaginal vault from total hysterectomy than will be obtained by doing a subtotal hysterectomy if complete mobility of the cervix exists. The cervix is held in place by the attachment of the pelvic fascia, and if there is any separation or relaxation of the cardinal ligaments from their attachment to the cervix I do not believe there is any surgical procedure which will maintain the cervix satisfactorily in a comfortable position. Any surgeon who is sufficiently skilled to maintain such a cervix in a normal position is also sufficiently skilled to perform total hysterectomy and, incidentally, I believe will have a better result. However, if the physician feels that he is subjecting his patient to an undue risk by doing total hysterectomy rather than subtotal hysterectomy, then I believe his conscience should be his guide. It would not be possible to say that subtotal hysterectomy is not a satisfactory operation in a high percentage of instances.

VAGINAL HYSTERECTOMY

If it is important that the general practitioner be familiar with total hysterectomy, it naturally follows, in my opinion, that he should be familiar with vaginal hysterectomy. A straight vaginal hysterectomy is nothing more or less than a total abdominal hysterectomy in reverse order. As I implied previously, vaginal hysterectomy is a surgical procedure which is taking a more prominent place in the management of menorrhagia with anemia attributed to small fibroids or ovarian dysfunction when the patient is less than forty-five years of age rather than treating them with radium when the production of the menopause is not desirable.

There are many advantages of vaginal hysterectomy over abdominal hysterectomy. There is less likelihood of peritonitis, adhesions, thrombophlebitis, and emboli, chiefly because the operation is practically extraperitoneal. There is virtually no loss of blood. The length of hospitalization is two-thirds to a half that of abdominal hysterectomy. The patient can get out of bed on her fifth or sixth day, and for this reason the incidence of phlebitis and emboli is definitely reduced. There is less postoperative discomfort than after abdominal hysterectomy and there certainly is not going to be any postoperative abdominal incisional hernia.

In the performance of a straight vaginal hysterectomy, a circular incision is made completely through the vaginal mucosa; then the bladder is separated from the cervix and elevated by a retractor. The posterior cul-de-sac is then opened and the uterosacral ligaments, cardinal ligaments, and infundibulopelvic ligaments are divided and ligated separately. The peritoneum is then closed with the stump of the infundibulopelvic ligaments brought extraperitoneally. The cardinal ligaments and uterosacral ligaments are sutured to the angles of the vaginal vault in their respective positions just as in total hysterectomy, and the vaginal vault is then closed with interrupted stitches. If a cystocele, with or without urinary incontinence, or a rectocele requires treatment, it is carried out jointly with the vaginal hysterectomy.

SUMMARY

I have discussed those conditions which seem to me to be more frequently encountered by the physician in general practice than by anyone else. I have emphasized certain points in the management of these conditions because I feel that there is considerable confusion with regard to their proper management, both medical and surgical.

MALARIA ENDEMIC IN IOWA*

ANDREW W. BENNETT, M.D., Iowa City

In this report it is not my purpose to discuss malaria in all its phases and complications. Rather I shall confine myself to reporting four cases of malaria which came to my attention during the course of one afternoon, and to the discussion of certain of their significant features: First, malaria is existent in Iowa; second, the unusual epidemiologic factors presented by the four cases; and third, the unusual resistance to antimalarial therapy encountered in these cases.

That malaria does occur in Iowa is amply proved by the records of the Iowa State Department of Health. Especially in the eastern tier of counties, but also throughout the state, many cases of malaria have been reported during the past years. That we do not have a higher incidence of this disease speaks well for the sanitation and hygiene of our communities.

As further evidence that malaria exists in Iowa, I wish to offer the following case reports:

On September 14, 1939, it was my fortune to be consulted by four adult patients, two males and two females, each residing in widely separated parts of the city, no one of the quartet residing within three-fourths of a mile of any of the others. These four patients presented almost identical prodromata and symptomatology: general malaise, temperature ranging up to 103 degrees, gastro-intestinal disturbances manifested by nausea, vomiting, and some diarrhea; and later severe prolonged chills and hyperpyrexia.

The first patient, Mrs. H., was seen on September 14, 1939, at noon; the second at 3:00 p. m., and the third at 5:00 p. m. of the same day. It was my opinion at that time that they were all suffering from a gastro-intestinal infection. On the following day, September 15, when I examined these patients, all complained of having spent a restless night with fever, sweating and aching. On September 16 there was but little improvement, and no new symptoms or signs were discovered.

On September 17 at 12:00 o'clock noon I received an urgent call to see Mrs. H. When I reached her a few minutes later she was in the midst of a severe chill which persisted for forty-five minutes, and was followed by a temperature rise to 105 degrees. She complained of feeling very weak and ill. This was followed by a profuse sweat with pallor and slight cyanosis. While yet occupied with this patient, the second patient, Mr. K., called saying he was very ill. Upon my arrival at his home I found he also was having a severe chill which persisted for fifty-five minutes and was followed by hyperpyrexia, sweats, and weakness. While attending him I was called to see Mr. C., who also was chilling. He had a severe chill of almost an hour's duration, which was followed by hyperpyrexia, a drenching sweat, and weakness.

Blood smears were taken from all three patients, and upon examination parasites were plentifully seen in each smear. Dr. Irving H. Borts of the State Hygienic Laboratory examined the smears and identified the Plasmodium vivax in each of them.

During the late evening of September 17, 1939, I was consulted concerning the fourth patient, Mrs. M., who was under the care of Dr. Ernest J. Anthony, then of Iowa City. She had had a severe chill, hyperpyrexia and sweats during the late afternoon similar to the cases previously described. Blood smears obtained from her contained Plasmodium vivax in great numbers.

We were thus confronted with four cases of malaria (Plasmodium vivax), each presenting practically identical clinical manifestations, all with the same laboratory findings. The histories of the four cases indicated the symptoms began the same day, September 14, 1939. The prodromal symptoms were similar even to small details; each of the patients had the initial chills which were severe and prolonged and followed by high temperatures reaching from 104 to 105 degrees with subsequent sweats and weakness.

Detailed inquiries revealed no reported cases of malaria in Iowa City or vicinity during 1939 previous to the occurrence of these cases. Reviewing the events prior to the infection with each patient, it was established that none of these four people had been away from home and immediate vicinity for many weeks preceding the illness. We concluded, therefore, that the infection had not been contracted in any other area, but must have occurred in Iowa City or vicinity.

Considering all the circumstances, the simultaneous onset, the similar severity of their symptoms, their previous isolation from commonly known malarial regions, and the wide separations of their residences, it seemed illogical that a mosquito infected with malaria was circulating through the city and accounting for these four isolated cases. It occurred to us that it was much more probable that at a common gathering of these people a single mosquito had bitten all four of them and then had been killed, thus ending its activity and preventing the development of additional cases of malaria.

In questioning the infected people it was found

*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.

that such a meeting did occur. On the evening of September 2, 1939, these four people with others attended a picnic at Lake McBride, a resort and lake about seventeen miles north of Iowa City. Two of them, Mrs. H. and Mr. K., traveled to and from the picnic in one car, and Mrs. M. and Mr. C. in a second car, both cars arriving simultaneously. Upon arrival these four people with the other occupants of the two cars stood visiting at the parking space awaiting the arrival of other guests. They recalled that while so occupied and in a closely joined group the mosquitoes had been plentiful and several of them were bitten. After the evening's entertainment they returned to the parking space for departure and again for several minutes these four were in close proximity to one another and exposed to more mosquitoes. After some time spent in visiting at the parking space, they returned to Iowa City in the same cars in which they had arrived and in the same arrangement of passengers. It would be reasonable to assume that during one of these occasions when they were all in a small group the inoculation occurred, the mosquito probably having been killed at the time of the last inoculation and thus ending the series of malaria cases to develop from that source.

It is, of course, not clear where the mosquito or mosquitoes became infected. Two sources, however, seem highly probable: First, since Lake McBride is a state park and many people from a distance visit it, someone who previously had had malaria and was a carrier might have visited there and the mosquito or mosquitoes fed upon him and thus became infected. This was, I believe, the probable origin of these infections. The other possible source which occurred to me should be mentioned, I believe, because of the fact that it is a controllable source of infection. In many medical centers, among them our State University of Iowa Hospital, certain patients are routinely treated by malarial inoculations. At that time the Department using this treatment stated they were using a strain of Plasmodium vivax for this purpose. However, I was unable to prove that any patient so treated resided in the vicinity of Lake McBride or had visited it. It is a possibility that such patients may be released while carriers of malaria if great care is not taken. Such an individual, of course, would act as a reservoir of malarial infection and might have been the source of infection in our series. I am sure that great care has been and is used in treating these patients and checking them before they are released, but as I will show in the discussion of treatment some patients are exceedingly resistant to therapy, and in such a case the cure might not have been completed in spite of the fact that careful checking failed to reveal the presence of parasites.

The treatment of malaria, while usually not difficult, may under certain conditions be a distinct problem. This was forcefully brought to my attention by my experiences with these cases. While all of the patients responded to specific therapy promptly, each of them had repeated recurrences of the disease. This fact is important in relation to determining when a patient may be designated as cured. Plasmodium vivax, or as it is often termed the "Benign Tertian" malaria, is no exception to the above statement. Of this series of cases, three were treated by myself and one by Dr. Anthony. The four patients responded almost identically.

Immediately after the diagnosis of Plasmodium vivax was confirmed by Dr. Borts, atabrin therapy was begun. This consisted of 0.1 gram (1½ grains) of atabrin three times daily for five days. Following this quinine, grains 10 three times daily, was prescribed for two weeks, then 12 grains daily for two months. During the acute phase of the disease the screening and isolation of the patients were carefully checked. Almost immediately after beginning treatment the patients all improved, and by the time they had completed the course of atabrin all felt themselves to be fully recovered.

In spite of the atabrin and quinine therapy, however, all four patients had recurrences as follows: Mr. C. on January 21, 1940, Mrs. H. on February 26, 1940, Mrs. M. on May 1, 1940, and Mr. K. on May 21, 1940. In each case the symptoms were similar to and almost as severe as the original infection, and in each case the Plasmodium vivax was easily demonstrated in thin blood smears.

All four patients were again given a course of atabrin and, in addition, forty-eight hours after completing the atabrin they were given a course of plasmochin, consisting of 0.01 gram (3/20 grain), combined with 3 grains of quinine, three times daily for five days. The plasmochin was given to insure destruction of the gametocytes. After a three-day rest period quinine, grains 10 three times daily, was again prescribed for two weeks, then grains 12 daily for two months. Again all symptoms cleared promptly and blood smears were negative for parasites. However, on July 28, 1940, Mr. K. had a severe recurrence, associated with diarrhea and vomiting so severe that it was necessary for him to be hospitalized. Mr. C. had a severe recurrence on May 8, 1940, and Mrs. H. on November 1, 1940. Each of them on this third recurrence had Plasmodium vivax parasites demonstrable in thin blood smears, as reported by Dr. Borts.

Again all patients, following their third recurrences, were treated as before with courses of atabrin, plasmochin and quinine. In January, 1941, Mrs. H. was ill with symptoms similar to her preceding attacks, but parasites could not be demonstrated even by the thick film technic. However, her symptoms cleared and to date she has had no further proved relapses. On February 16, 1941, Mr. K. had a similar illness, but again no parasites could be found even with the thick smears. His symptoms also cleared and to date he has had no further recurrences. On February 22, 1941, Mr. C. also had a similar episode, but as in the other two cases no parasites were found; his symptoms also cleared and to date he has had no further recurrence. I cannot say that without the finding of parasites in the blood smears these last described episodes were recurrences of malaria, but due to the response to treatment it seems highly probable that they may have been relapses in a mild form.

During the initial attack these patients were all treated promptly and energetically with atabrin and quinine as soon as the diagnosis was confirmed by blood findings, and during each of the following relapses they were treated with atabrin, plasmochin and quinine. However, each had from three to four recurrences, all verified by finding the parasite in the blood smears. It would seem consistent to say, therefore, that malaria can at times be very resistant to treatment and that it is difficult to determine at which time the patient may be said to be cured.

I should like to say that none of these patients had any serious difficulty with the medication. The atabrin stained the skin slightly yellow and in one patient, whose hair was very gray, the hair was yellowed at the temples. This staining was transitory. The quinine in large, long-continued doses caused considerable trouble from ringing in the ears and deafness; however, no permanent impairment of hearing was observed. It is probable that as the men and women of our armed forces return from malaria infested areas we in Iowa may expect to be confronted with problems incident to malaria.

In conclusion, I should like to emphasize the following points:

1. Malaria is endemic in Iowa.

2. It may respond readily to specific treatment or it may resist all treatment for an indefinite period of time.

3. We should watch for relapses in known cases, those either accidentally or intentionally infected.

Discussion

Dr. Willis M. Fowler, Iowa City: Dr. Bennett's discussion of this small epidemic of malaria was extremely interesting and has served to emphasize several important features of this disease. We are inclined to think of malaria as a disease of the tropics and subtropics and to forget that it can and does occur in this locality and that it may, in the future, become much more prevalent than it is at present.

Dr. Bennett emphasized the recurrences which occurred in his group of patients. These patients received what is considered to be the most effective course of therapy, consisting of quinine, atabrin, and plasmochin, all in adequate dosage and over the recommended period of time. In spite of this intensive therapy all patients had repeated recurrences indicating that we have no therapy for this disease which is entirely satisfactory or adequate. The clinical manifestations may be kept under control by the continuous administration of anti-malarial drugs, but when this medication is discontinued the disease may recur. The organisms remain in the capillaries of the viscera, particularly in the bone marrow, from which they may emerge and produce symptoms. The drugs which are used control the disease but not the infection. It has been noted repeatedly that the disease may be kept under control while the patient resides in a warm, tropical country, but upon return to a colder climate a recurrence occurs.

At present our fighting forces are widely distributed and many of them are quartered in areas where malaria is prevalent. Infection cannot help but occur under these conditions. At the conclusion of hostilities the men harboring these organisms will return to this and other communities, and although the acute phase of the disease may have been controlled, there will be many chronic or quiescent cases which will recur. We are accustomed to think of malaria as a disease with regularly recurring episodes of fever, but one must remember that in the chronic and the recurrent cases there may be many atypical features in the clinical course, and malaria must be considered in those patients having unexplained febrile episodes. Each of these patients is a potential focus for a further spread of the disease, since he may act as a carrier from which mosquitoes may become infected. For these reasons it seems probable that many more cases of malaria will be encountered in the future.

Dr. Milford E. Barnes, Iowa City: This excellent paper by Dr. Bennett has several very interesting features. In all the vast literature on malaria I do not recall anything quite like the epidemiologic picture which is here presented.

These cases occurred in a community in which malaria as a naturally acquired infection is extremely rare. It will be noted that these four patients developed their initial symptoms on the same day; not only that, but the onset varied within a period of but a few hours. All were caused by the same species of organism (Plasmodium vivax). Further-

more, these were the only known cases of malaria in the entire county, and no other known cases developed within the county during that autumn. There was one and only one occasion when this particular group of four individuals had associated during the summer. This one occasion was the evening of September 2 on which they attended a party held in a cottage at Lake McBride. On that occasion all noticed and complained that the mosquitoes were bad. No one knows whether the mosquitoes which tormented the party that evening were Anopheles, but we do know that the conditions are favorable for Anopheles breeding along the shores of this little lake. Moreover, on repeated occasions there have been caught at this lake specimens of Anopheles quadrimaculatus, a known efficient vector of malaria. It may or may not be of significance that the plasmodia infecting the four patients in each instance proved to be resistant to treatment.

The circumstances under which Anopheles mosquitoes could have been infected at that lake are, of course, obscure. However, it was possible for a malaria carrier to visit the lake long enough to have accomplished this. Previously there had been some malaria among Civilian Conservation Corps members housed at Solon, and crews from that camp worked at various times on the McBride project. Dr. Bennett mentioned the possibility of infection from patients therapeutically infected at the University Hospitals. The records reveal that the use of a strain of Plasmodium vivax had to be discontinued and a strain of Plasmodium malariae employed instead. It is possible that a carrier of this vivax strain visited the lake.

The considerations summarized make plausible Dr. Bennett's theory that one infected Anopheles mosquito bit and infected each of these four individuals on the evening of September 2. In fact, it is difficult to imagine a more probable explanation. The onset of the initial symptoms twelve days later is in keeping with this theory.

Dr. Bennett has called attention to the stubbornness of these infections, a point also emphasized by Dr. Fowler as something to watch for among soldiers returning from malarious regions. At the present time there is a case in Iowa City of recurrent malaria in a naval officer who was infected at Guadalcanal. Such recurrent, chronic, or latent cases may be of importance from a public health point of view as well as from a clinical point of view. Thus, it will be of importance in future examination of prospective blood donors from the overseas group to exclude the possibility of chronic malaria. Also, because we have an abundance of Anopheles quadrimaculatus in this state, any large influx of malaria carriers among men returning from service may cause numerous local foci of infection among the mosquitoes. If so, we may expect to see not only recurrent cases among the returned men from the armed forces, but an increase in the number of endemic cases over the next few years.

THE KENNY TREATMENT IN ACUTE POLIOMYELITIS*

A Report of the First Year at the Iowa Lutheran Kenny Cottage

James E. Dyson, M.D., Des Moines

On July 29, 1942, at the Iowa Lutheran Hospital in Des Moines, a pavilion for the treatment of acute infantile paralysis during the contagious stage was dedicated by Sister Elizabeth Kenny and named "Kenny Cottage" by her. During the year thirty-nine patients have been admitted with acute poliomyelitis in different stages and lengths of time after the onset. The varying symptoms and responses to treatment have been revealing to us.

Dr. Dwight C. Wirtz, orthopedist, and I attended the University of Minnesota School for Continuation Study in June, 1942, and became convinced that poliomyelitis should be treated in the acute stage according to the Kenny concept. We have been assisted in this work by Mrs. Louise Egenes Neveln, R.N., K.T., and two other technicians who had the six months training course for technicians at the University of Minnesota and Minneapolis General Kenny Clinics.

Some of our patients were brought in on the second day of their illness but more frequently from the fifth to the eighth day. We feel that the earlier the Kenny treatment is given the better. Since the first debilitating symptom of poliomyelitis is muscle spasm in the neck and back, and since this spasm may become so severe as to endanger the very life of the patient by inhibiting respiration, we feel that the early relief of this spasm is even life-saving. We had one good example of this condition in a patient twenty-one months of age. He came in on the fifth day of his illness with neck, back, and chest spasm so severe that during the first twenty-four hours it was not only necessary to put hot packs on his chest and change them frequently, but it was also necessary to give breathing stimulation similar to artificial respiration. He was not placed in the respirator. The second day the muscle spasm began to relax, and each succeeding day his improvement was such that he left the hospital in three weeks with no muscle spasm or muscle weakness.

Although muscle spasm is generally in the posterior muscle groups, such as the neck, back, hamstring, gastrocnemius, and soleus, occasionally other muscle groups are involved. One child, four and two-thirds years of age, had severe muscle rigidity of the abdomen on the third and

*Presented before the Iowa Lutheran Hospital Staff Meeting, Des Moines, July 20, 1943.

SUMMARY OF PATIENTS TREATED AT IOWA LUTHERAN KENNY COTTAGE DURING FIRST YEAR OF OPERATION

Patient—Age in Years	Date and Place of Onset	Date of Admission	Date Discharged	Length of Hospital Stay	Spinal Fluid Cell Count	Muscle Spasm	Muscle Weakness	Result of Treatment and Present Condition
E.H. 8	7-27-42 Des Moines	7-28-42	8-16-42	3 wks.	50	Posterior neck and back	None	Complete recovery; in school
M.P. 40	7-3-42 Des Moines	7-29-42	11-5-42	3¼ mos.		Posterior neck, arms, back, and hamstrings	Left upper trapezius and coracobrachialis	Complete recovery; teaching school
H.Z. 9	8-1-42 Maxwell	8-4-42	11-1-42	2 mos.	37	Posterior neck, back, abdomen, and hamstrings	Both psoas, biceps femoris, and quadriceps	Good recovery; in school
R.V. 4½	7-4-42 Des Moines	8-5-42	10-3-42	2 mos.		Posterior neck, back, and hamstrings	Sternocleidomastoid	Complete recovery
B.K. 27	7-22-42 Perry	8-8-42	9-13-42	1 mo.	18	Posterior back and hamstrings	Left quadriceps, right deltoid, coracobrachialis and supraspinatis	Complete recovery
L.W. 1¾	8-3-42 Grinnell	8-9-42	8-30-42	3 wks.	34	Posterior neck, back, and chest	Diaphragm and intercostal	Complete recovery
M.L.D. 32	7-6-42 St. Louis, Mo.	8-11-42	3-14-43	7 mos.		Posterior neck, back, arms, and legs	Neck, shoulders, back, arms, hands, thighs, legs, feet, and abdominal	Walks with Kenny sticks; weak left tibialis posticus, right deltoid, coracobrachialis, infraspinatus and teres minor
C.L. 17	8-4-42 Runnells	8-13-42	9-28-42	1½ mos.	15	Posterior neck, back, and hamstrings	Upper trapezius	Good recovery
L.B. 20	8-16-42 Des Moines	8-17-42	9-25-42	1¼ mos.	34	Posterior neck, back, and shoulder	Abdominal	Complete recovery; working in garage
M.C. 2	8-19-42 Montezuma	8-21-42	12-10-42	3¾ mos.	213	Posterior neck and back	Left quadratus lumborum	Complete recovery
J.S. 3	8-21-42 Des Moines	8-21-42	9-12-42	3 wks.		Posterior neck, back, and hamstrings	Sternocleidomastoid	Complete recovery
V.W. 16	8-19-42 Lamoni	8-24-42	9-16-42	3 wks.		Posterior neck, back, and hamstrings	Bladder, rectus abdominal, diaphragm, obliques, psoas, biceps femoris, and quadriceps	Complete recovery
B.B. 11	8-26-42 Des Moines	8-27-42	9-17-42	4 wks.		Back and hamstrings	Psoas, biceps femoris, gluteus medius and minimus	Complete recovery; in school
M.C. 7	8-28-42 Des Moines	8-29-42	10-7-42	1¼ mos.	1	Posterior neck, back, and hamstrings	Both quadriceps and biceps femoris	Complete recovery; in school
E.C. 25	8-1-42 Des Moines	8-31-42	4-18-43 (Left, not discharged)	7¾ mos.	110	Back, diaphragm, intercostal, abdominal, and both legs	Diaphragm, back, intercostal, abdominal, and both legs	Normal breathing; patient could bear weight on the legs when she left the hospital
J.H. 9	9-5-42 Norwalk	9-6-42	9-27-42	3 wks.	22	Posterior neck and back	None	Normal
D.W. 14	8-4-42 Des Moines	8-9-42	10-8-42	2 mos.	40	Posterior neck, back, hamstrings, and gastrocnemii	Psoas	Complete recovery
G.H. 7	9-10-42 Montezuma	9-12-42 5-25-43	1-6-43 In Hospital	3¾ mos.		Posterior neck, back, pectoral, hamstrings, and gastrocnemii	Complete paralysis chest, back, abdominal, arms and legs; in respirator three weeks	Still in hospital, can sit and move arms some; chest movement fair, cough weak

A.N. 6	9-9-42 Kingsley	9-18-42	1-18-43	4 mos.	218	Back and hamstrings	Right leg, quadriceps, and psoas	Walks without a brace; right gastrocnemius still a little tight
E.E. 5	9-14-42 Stanhope	9-18-42	2-20-43	5 mos.	44	Posterior neck, back, and hamstrings	Right leg, quadriceps total and other muscles partial	Walks without a brace; some weakness and atrophy in thigh
A.K. 33	8-1-42 Indianapolis, Ind.	9-22-42	11-14-42	2 mos.		Posterior neck and facial	Sternocleidomastoid, facial, left pectoral and abdominal	Complete recovery; working full time
J.H. 5	9-18-42 Eldon	9-27-42	2-20-43	5 mos.		Back	Left rhomboidii, infraspinatus, teres minor, and deltoid	Weakness in shoulder and arm
M.P. 11	10-1-42 Winterset	10-1-42	11-1-42	1 mo.	190	Posterior neck, back, and hamstrings	Psoas, biceps femoris, gluteus minimus and medius, and quadriceps	Complete recovery; in school
F.K. 2	9-29-42 Des Moines	10-1-42	11-5-42	1 mo.	14	Posterior neck, back, and hamstrings	Right psoas and biceps femoris	Complete recovery
J.L. 15	9-25-42 Ames	10-4-42	11-8-42	1 mo.	45	Posterior neck, back, and hamstrings	Psoas, gluteus minimus, biceps femoris, and quadriceps	Complete recovery; in school
C.L. 13	9-23-42 Ames	10-5-42	11-15-42	1¼ mos.	10	Posterior neck, back, and hamstrings	Facial, left sternocleidomastoid, deltoid, and coracobrachialis	Complete recovery; in school
G.W. 17	10-8-42 Sioux Rapids	10-14-42	11-13-42	1 mo.		Posterior neck, back, and hamstrings	Left facial, right sternocleidomastoid and palate	Complete recovery
R.G. 1¼	9-19-42 Kingsley	10-14-42	10-22-42	1 wk.		Right latissimus dorsi	Right deltoid	Recovery
L.C. 18	10-22-42 Earlham	10-30-42	2-6-43	3¼ mos.		Posterior neck, back, and hamstrings	Left hand flexors, opponens pollicis, right biceps femoris	Weak left opponens
L.P. 16	9-26-42 Kelley	10-30-42	2-4-43	3¼ mos.	101	Posterior neck, back, and hamstrings	Right coracobrachialis and biceps femoris	Good arm recovery; hamstrings slightly tight
M.M. 2	8-1-42 Des Moines	11-11-42	12-6-42	1 mo.		Posterior neck, back, and hamstrings	Bladder, left leg	Walks
P.McM. 17	10-27-42 Paducah, Ky.	11-19-42	Still in hospital			Back and hamstrings	Bladder, left coracobrachialis, biceps and triceps, both hip adductors, abductor flexors, abdominal, hamstrings, quadriceps, right tibial, peroneal, gastrocnemii and toe extensors	Walks with Kenny sticks; arms completely recovered; right leg weak, bears weight without braces
R.K. 26	12-5-42 Iowa Falls	12-10-42	12-26-42 Deceased	16 days		Posterior neck, back, chest, and hamstrings	Bladder, chest, abdominal, left arm, and right leg	Deceased
L.B. 16	12-26-42 St. Louis, Mo.	1-5-43	5-6-43	4¼ mos.	300	Back and hamstrings	Gluteus maximus, medius and minimus; right adductors, quadriceps, tibial, peroneal, biceps, and hamstrings	Walks with Kenny sticks; weak right leg
B.P. 3	1-1-43 Des Moines	1-6-43	2-4-43	1 mo.	175	Back and hamstrings	Both psoas and hamstrings	Complete recovery
J.M. 4⅞	1-11-43 Des Moines	1-12-43	2-26-43	1½ mos.	73	Back, abdominal, and gastrocnemii	Right psoas and quadriceps	Complete recovery
F.W. 10	11-1-42 Des Moines	2-1-43	6-10-43	4 mos.		Back, pectoral, hamstrings, and gastrocnemii	Left psoas and hamstrings	All muscles functioning; hamstrings tight
T.R. 32	10-15-42 Coon Rapids	2-17-43	Still in hospital			Back, hamstrings and gastrocnemii	Diaphragm, sternocleidomastoid, trapezii, latissimus dorsi, intercostals, abdominal, and general of legs, left flexors of hand and thumb, and pronators and triceps	Walks with Kenny sticks, no braces; arms and hands still weak
J.E. 16	8-24-42 Underwood, N.D.	4-23-43	Still in hospital	In Bismarck hospital 8 mos.		Posterior neck, back, chest, both arms, and both legs	Total; in a respirator	Still in the respirator at night; chest and arms are relaxing

fourth days. The fact that she also had a white blood count of 14,000 and a fever of 102 degrees made it necessary to also consider the possibility of an acute appendicitis. One would think it rarely necessary to differentiate acute appendicitis and poliomyelitis. A concurrent throat infection was found, which was the probable cause of the fever and the leukocytosis since they were higher than usually found in poliomyelitis. The patient had so much back spasm that she lay in bed in an acute lordosis posture. With the use of hot packs and elevation of the thighs on pillows we were able to relax her back and abdomen and give her relief. She has made a good recovery after six weeks in the Kenny Cottage and three months in the convalescent home.

Muscle spasm may be limited to one muscle and cause a definite disability as was shown by a patient fifteen months of age. He had a rather mild poliomyelitis on September 19, 1942, but had weakness of the right shoulder, so-called deltoid paralysis. He was sent to us in this condition on October 14, about one month after the onset. Examination revealed his shoulder weakness was merely alienation from muscle spasm of the latissimus dorsi muscle. Eight days of hot packs relieved this spasm and the alienated deltoid muscle began normal function.

Muscle spasm is painful, and if the Kenny treatment did nothing more than relieve the patients of their pain it would be well worth using. None of our patients were given sedatives. At night they were permitted to curl up on their sides or turn onto their stomachs to sleep in a natural position. In fact, a standing order has been given not to permit the use of sedatives. We consider sedation dangerous to a patient with poliomyelitis, especially if the respiratory center is already depressed by the accompanying encephalitis. We had to learn this point the hard way in two instances when morphine and codeine were given before our rule was in effect. We had to place these two patients in the respirator until the effect of the opiate on the respiratory center wore off.

Each patient immediately on admission is taught by the technician the proper method of breathing to prevent incoordination of the accessory respiratory muscles. The confidence thus instilled in the patient by the technicians relieves him of the anxiety and fear of respiratory failure. He then is better able to cope with the situation of spasm of the chest muscles if it should occur.

Daily stimulation of the affected parts is begun by the technician in the acute stage. The object of early stimulation is to restore the neuromuscular association. Passive motion is soon started and the range of motion of each joint is limited to that arc which does not cause pain, since pain will increase muscle spasm.

None of our patients was put in splints or casts. We have heard it said that the hot packs were splints. How can woolen blanket packs wrapped around the thigh, calf, and foot be a splint to a leg when all the joints are left uncovered?

The year 1942 was not an epidemic year and most of the cases were not severe. We had a few unusual occurrences. There were more high cervical and cranial nerves involved than usual. We had two patients with facial muscle weakness; three with palate weakness; three with sternocleidomastoid muscle weakness; one with upper trapezius muscle weakness; and three with diaphragm weakness, unable to cough. There were two cases of total paralysis. These patients required the respirator. In our opinion this is the only type of poliomyelitis in which the respirator is essential. If the respiratory difficulty is due to muscle spasm of the intercostal, or pectoralis muscles, hot packs will relieve it, whereas the pull of the iron lung would increase the muscle spasm. The respirator does not benefit patients with the bulbar type of poliomyelitis since their breathing is so incoordinated that they cannot breathe with the iron lung and may aspirate mucus or water into the lung. We had one patient with the bulbar type, a man twenty-six years of age, who developed pneumonia and died. It was the only death in the thirty-nine cases. There were two other patients who had weakness and incoordination in both arms and both legs. Fifteen patients had legs involved with weakness and incoordination, and five others had dysfunctioning muscles in the arms. A great number had no definite weaknesses develop and had only muscle spasm in the neck, back, and hamstring muscles.

In most cases the temporary bowel and bladder dysfunction was a considerable problem the first week of the illness. The bowels invariably did not move without artificial aid. We made it a rule to give epsom salts by mouth and 1-2-3 enemas the first few days. In this we were following the suggestion of Toomey[1] of Cleveland. The bladder would not empty but would become overfilled and unless catheterization was performed, an overflow dribbling would begin. We consider the care of the bladder an important part of the early care of patients with poliomyelitis. We had several old cases this year in which the patients had developed kidney and bladder calculae. By catheterizing the patients and turning them on their abdomens twice a day, we have had no calculae in this group of thirty-nine patients. There are two factors which brought about this

improved condition: First, moist heat on the lower back and abdomen relieves the muscle spasm and aids the return of normal function; and, second, no leg and hip casts are applied which would keep the patient inactive and helpless on his back.

We have no braces or orthopedic devices on any of our patients, and of the thirty-nine admitted, twenty-eight are entirely well, three patients whose legs were involved walk very well with only slight limping, two have to use Kenny sticks to walk and two more are still under treatment but can bear weight and take a few steps. The two patients with total paralysis are only able to sit up. As noted in the accompanying table, some of the patients came to us eight months after the onset. One man had had orthopedic treatment and full leg braces made only four months after the onset. He was unable to use the braces because of incoordination and weakness in his arms. He could not use canes or crutches to assist himself. Kenny treatment was begun four months after the onset. He now has been treated four months and already has good leg function without braces; his greatest weakness is in one arm and shoulder.

The diet has been kept rather high in protein since many of our patients were growing children. We have given extra milk. All patients have been given cod liver oil and vitamin B. We have not used the high vitamin B reported by one clinic[2] but have given a high normal dose. We have found it necessary to give salt tablets, especially in the hot summer weather, because of the profuse perspiration. We have not used prostigmine in any of the acute cases. We have been able to relax the patients by the hot fomentations. We have given four of our 1940 patients, who had persistent spasm, prostigmine according to the method of Kabat and Knapp[3], and obtained considerable relaxation in three of them.

X-ray treatment was used on the spinal nerve roots according to the method of Bordier[4] on four patients, two with total leg weakness, one with arm weakness, and one who was paralyzed in both arms and both legs. Both the patients with leg involvement and the one whose arm was affected improved faster and more completely than any similar patients so afflicted at the onset. We believe the treatment merits further use. There is considerable physical difficulty in giving these deep x-ray treatments to the patient during the quarantine period.

The tabulation of the thirty-nine acute cases brings to attention the age of the patients; none were infants and many were past childhood. It shows that seasonal predominance is July to November. We had two children who were attacked in January. The table shows the length of hospitalization and in many instances spinal fluid cell count. It also shows that practically every patient had neck and back spasm, nearly all had hamstring muscle spasm, and a large number had gastrocnemius muscle spasm.

Since not all weakness is paralysis, we have chosen to list the muscle weakness at the onset as such. The condition of all patients at this writing (July, 1943) is difficult to report. We have had our patients return for checkups and feel it is important to do so, since overactivity has brought back muscle spasms and changed functions of arms, backs, and legs in some who thought they were well.

We have treated thirty-five patients who suffered from the illness in previous years who are not listed in the table. Some patients who were attacked one and two years ago have been improved to the extent of walking without braces; many have had incoordinations corrected by muscle re-education.

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THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

MITRAL ENDOCARDITIS AND CORONARY THROMBOSIS

F. P. McNamara, M.D., Dubuque

Cases in which coronary thrombosis is associated with mitral endocarditis are apparently uncommon but have occasioned some discussion as to a relationship between the two. The case to be reported is that of a patient who was found dead, and while the known clinical record is negative, the lesions in the heart are typical.

CASE REPORT

The patient, a bachelor fifty-four years of age who lived alone, was found dead at the foot of a flight of eight steps. The main questions were whether he had died as the result of the fall downstairs or whether death had preceded the fall.

NECROPSY ABSTRACT (Necropsy 869)

The body was that of a well developed and nourished white man. There were numerous abrasions about the face but there was no bleeding

from the ears or nose. The peritoneal cavity contained 200 cubic centimeters of clear, straw-colored fluid. The engorged liver's edge extended 11 centimeters below the right costal border but otherwise the viscera were normally disposed. The spleen was approximately twice normal size because of congestion, and all the viscera were acutely congested. The right kidney showed a round mass in the cortex, and microscopically this was a malignant nephroma. The opposite kidney showed one healed infarct. There was an ulcer near the pylorus of the stomach which was benign upon microscopic examination. The skull and brain were negative.

The most important lesions were in the heart. The pericardial sac contained 50 cubic centimeters of faintly blood-tinged serous fluid. Each auricle



Fig. 1.
Photograph showing stenosed mitral orifice with fresh vegetations on the upper surfaces and the thrombosed left coronary artery (arrow).

and the right ventricle were dilated while the left ventricle was contracted. The right side of the heart was essentially negative. On the left, the dilatation of the left auricle was most striking (Figure 1). This was found to be due to stenosis of the mitral orifice caused by great thickening of the leaflets by fibrous tissue which had undergone calcification in some areas. The orifice was represented by a slit 1 centimeter in length and averaging 2.5 millimeters in width. On the upper surface of the leaflets there were a few fresh vegetations. The myocardium of the left ventricle averaged 14 millimeters in thickness and on tangential section showed slight fibrosis in the upper portion, but this was more marked toward the apex. Grossly there was no definite degeneration, although the myocardium was somewhat reddened. On dissection of the left coronary artery, a thrombus completely filled the lumen at the primary division. The heart weighed 485 grams.

Microscopically the mitral leaflets showed fibrosis and some calcification as well as some exudate on their upper surfaces. The myocardium showed small round cell and plasma cell accumulations in several sections chosen. In the area supplied by the left coronary artery, there was a slight infiltration by polymorphonuclear leukocytes and red blood cells while the area seemed edematous. In a few instances the myocardial cells showed hyaline degeneration. The thrombus in the left coronary artery showed early organization. In addition there was an older and firmly organized clot which had reduced the lumen considerably. There were slight deposits of calcium salts in the artery wall, as well as fibrosis and slight round cell infiltration. The sections of the viscera showed slight arteriosclerosis and signs of chronic passive congestion as well as acute congestion.

Anatomic diagnosis: 1. Chronic and subacute mitral endocarditis (stenosis and regurgitation); chronic and acute dilatation of the left auricle, right auricle, and ventricle; chronic and acute congestion of all the viscera; ascites; healed infarct of the left kidney.

2. Organized and organizing left coronary thrombosis with fresh and healed infarcts of the left ventricle; abrasions of the face resulting from fall.

Subsidiary Anatomic Diagnosis: Malignant nephroma of the right kidney; arteriosclerosis; benign ulcer of the stomach.

COMMENT

While the clinical history is unknown, undoubtedly this patient had a small thrombus of the left coronary artery a considerable time before death. The fresh thrombus was of at least several days duration as indicated by beginning organization of the clot and the inflammatory infiltration of the infarct of the heart. The mitral disease was of long duration and probably began at least thirty years before. The Aschoff bodies in the myocardium apparently did not involve the coronary arteries and probably the only relationship of the mitral disease to the coronary thrombosis was because of the resulting chronic, passive congestion which favored thrombus formation.

Another interesting feature was the finding of a malignant nephroma in the kidney. This is the

nineteenth case in which unsuspected malignant tumors were encountered at necropsy in our series of 917 necropsies (over 2 per cent).

GENERAL DISCUSSION

Gross and Oppenheimer[1] recently reviewed the literature concerning the association of rheumatic endocarditis and coronary thrombosis. They were especially concerned with whether the association was not purely coincidental or whether the coronary sclerosis was a degenerative lesion superimposed on coronary arteries previously damaged by rheumatic fever and therefore predisposed to coronary sclerosis. They reported thirty cases in which the lesions were associated. These were found in a series of 3,264 necropsies. They concluded that there was no proved etiologic relationship between the initial valvular lesion and the subsequent development of coronary thrombosis. They stated, however, that Karsner and Bayless were of the opinion that the rheumatic fever, an inflammatory process, did predispose to the premature development of coronary arteriosclerosis. Gross and Oppenheimer pointed out that if there were such a casual relationship, coronary arteriosclerosis should be expected in greater frequency and at an earlier age in patients with rheumatic fever. In their series of thirty cases divided about equally between the two sexes, the ages varied from twenty-nine to ninety-one, with an average of fifty-six. In our case the age was fifty-four years. This is the first case in our series of necropsies in which the two lesions were associated, although we have had several cases of chronic mitral disease in which the age of the patient at death was over fifty years, and there have been nearly one hundred cases of coronary thrombosis. Most of the latter patients were over fifty years of age. The infrequency of the association of the two lesions which make up the bulk of cardiac disease seems to indicate that it is only coincidental. In other words, patients with rheumatic valvular disease usually succumb before arteriosclerosis of the coronary arteries becomes well established. However, in rare instances the patients survive until degenerative heart disease becomes well established. Therefore, in men or women known to have mitral disease, the chance of also encountering coronary disease increases progressively the older they get after having reached fifty years of age.

Gross and Oppenheimer stated that although the association of rheumatic valvular disease and coronary sclerosis is a rarity and the diagnosis is difficult, such a diagnosis should be suspected in some cases. In an individual with signs and symptoms of rheumatic heart disease who survives middle life and who develops anginal pain not attributal to aortic disease, active rheumatic fever, or pericarditis, the coexistence of coronary disease is to be considered. Rare cases of angina pectoris in mitral stenosis without evidence of active rheumatic fever occur in the absence of aortic insufficiency. An electrocardiogram may be of great help. However, they caution against diagnosing coronary disease from electrocardiograms alone.

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THE AMERICAN CONGRESS OF PHYSICAL THERAPY

The American Congress of Physical Therapy will hold its twenty-second annual scientific and clinical session September 8, 9, 10 and 11, 1943, inclusive, at the Palmer House in Chicago. Rehabilitation is in the spotlight today, and physical therapy plays an important part in this work.

The annual instruction course will be held from 8:00 to 10:30 a. m., and from 1:00 to 2:00 p. m. during the days of September 8, 9 and 10, and will include a roundtable discussion group from 9:00 to 10:30 a. m., Thursday, September 9. The scientific and clinical sessions will be given on the remaining portions of these days and evenings. A feature will be an hour demonstration showing technic from 5:00 to 6:00 p. m. during the days of September 8, 9 and 10. All of these sessions will be open to the members of the regular medical profession and their qualified aides.

For information concerning the instruction course and program of the convention proper, address the American Congress of Physical Therapy, 30 North Michigan Avenue, Chicago, Illinois.

SPEAKERS BUREAU RADIO SCHEDULE

WSUI—Mondays at 9:15 a. m.
WOI—Wednesdays at 2:05 p. m.

August 2- 4	Dental Care	L. M. Fitzgerald, D.D.S.
August 9-11	Hay Fever	Julia Cole, M.D.
August 16-18	High Blood Pressure	Arthur N. Schanche, M.D.
August 23-25	Common Diseases of Animals Communicable to Man	H. E. Biester, D.V.M.
August 30-September 1	Preparing Your Child for School	Guido J. Sartor, M.D.

STATE DEPARTMENT OF HEALTH

Nate L. Bierring

EXAMINATION OF FAMILY GROUPS FOR THE PRESENCE OF VENEREAL DISEASE

ANDREW C. WOOFTER, M.D., Acting Director
Division of Venereal Disease Control

The discovery of venereal disease in a married person should bring to mind examination of the marital partner, the only exception being absence of exposure during the infectious stage. Omission of this procedure might be compared with failure to anticipate the onset of smallpox or of any other communicable disease transmitted by a patient or carrier.

Discovery of syphilis or gonorrhea in the husband or wife may not establish the source of an infection but can serve to prevent disabling complications which appear in untreated persons. It may also prevent infection of children yet to be born.

Children born of mothers infected with syphilis deserve adequate examination. This should consist of more than one blood test, even if the first report is negative. Congenital syphilis may present physical signs at birth, but as a rule these are delayed until after the third week following birth. The blood test (cord or venous blood) may be positive or negative. Reagin from maternal blood can "spill over" into the blood stream of the child, continuing to be positive (false positive) for as long as two months and revert to negative without the presence of syphilis. On the other hand, syphilis may be present at birth with a negative test, followed by a later appearance of evidence of infection.

The cost of caring for late, disabling complications of acquired and congenital syphilis far outweighs all difficulties and expenditures of early diagnosis.

UNDULANT FEVER (BRUCELLOSIS) IN IOWA

Information from Case Reports for the Fiscal Year July 1, 1942, to June 30, 1943

The reported incidence of undulant fever or brucellosis of man was at a high level during the first six months of 1943. Reported cases for the period totaled 212, compared with 128 for the first half of 1942. Cases numbered 417 for the fiscal year July 1, 1942, to June 30, 1943; the figure for the corresponding period of the previous year was 362. The Division of Vital Statistics recorded three deaths from this disease for the calendar year 1942.

The accompanying tables present data referable to: (1) the month of onset and month of report of cases for the past fiscal year, (2) distribution of patients according to age and sex, and (3) the history of contact, use of raw milk, and occupation of patients.

During the past fiscal year, nearly a third of the cases had onset of illness in the three months of July, August, and September. Among patients with ages between ten and seventy, males far outnumbered females; the reverse held for those under ten and over seventy years of age. For all ages, the percentage of incidence among males was 74.3 as compared with 25.7 among females.

UNDULANT FEVER IN IOWA
July, 1942, to June, 1943

Month of Report and Month of Onset of Illness Based on 350 Case Reports as Completed by Iowa Physicians

Month	Report	Onset
July	53	31
August	44	32
September	29	31
October	29	25
November	28	29
December	33	17
January	31	25
February	24	11
March	23	21
April	22	20
May	24	16
June	10	29
Date onset not given		63
	350	350

UNDULANT FEVER IN IOWA
July, 1942, to June, 1943
Age and Sex of Patients
Based on 339 Case Reports Completed by Attending Physicians

Age Group	Male	Per cent	Female	Per cent	Total
1- 9	2	16.7	10	83.3	12
10-19	20	87.0	3	13.0	23
20-29	64	77.1	19	22.9	83
30-39	86	81.1	20	18.9	106
40-49	46	70.8	19	29.2	65
50-59	25	75.8	8	24.2	33
60-69	7	63.6	4	36.4	11
70-79	2	40.0	3	60.0	5
80 plus	0	0.0	1	100.0	1
All Ages	252	74.3	87	25.7	339

Considering the patients in rural areas, 76 per cent were male farm workers and 24 per cent were farm wives and children. Among urban groups, 52 per cent of the patients were packing house workers. The attack rate in the group of packing house employees is estimated at 42.7 per 10,000, compared with 25.0 per 10,000 among veterinarians and 3.8 per 10,000 in male farm workers. Among 57 housewives, merchant-professional people, and children in urban areas, 48, or 84 per cent, gave no history of contact with cows and hogs; 45, or 94 per cent, of the latter were users of raw milk.

UNDULANT FEVER IN IOWA
July, 1942, to June, 1943
History of Contact, Use of Raw Milk, Occupation of Patients
Based on 281 Case Reports Completed by Physicians

Residence	Number	% in Group	Rate per 100 M. Pop.	History of Contact	No Contact Number	Raw Milk
Rural						
Farm Worker	120	75.9	*38.5	120		
Farm Wife	24	15.2	1.6	19	5	5
Child and Teen Age	14	8.9	1.0	11	3	3
Total	158	100.0		150	8	8
Urban						
Packing House Worker	64	52.0	*426.7	64		
Housewife	27	22.0	2.5	3	24	21
Merchant—Professional	17	13.8	1.0	4	13	13
Child and Teen Age	13	10.6	1.2	2	11	11
Veterinarian	2	1.6	*25.0	2		
Total	123	100.0		75	48	45

*Specific Morbidity Rate.

PREVALENCE OF DISEASE

Disease	June '43	May '43	June '42	Most Cases Reported From
Diphtheria	9	11	6	Pocahontas
Scarlet Fever	77	200	72	Boone, Polk, Pottawattamie, Woodbury
Typhoid Fever	2	3	4	Poweshiek
Smallpox	0	7	2	None
Measles	424	978	833	Black Hawk, Linn, Des Moines, Muscatine, Polk
Whooping Cough	183	190	99	For the State
Brucellosis	39	25	23	For the State
Chickenpox	148	263	172	Black Hawk, Des Moines, Scott, Story, Woodbury
German Measles	161	910	23	Dubuque, Sac, Des Moines
Influenza	1	3	0	Johnson
Meningitis (Meningococcus)	2	10	0	Bremer, Davis
Mumps	159	369	272	Boone, Franklin, Story
Pneumonia	18	46	38	For the State
Poliomyelitis	0	0	1	None
Tuberculosis	73	40	2	For the State
Tularemia	0	0	0	None
Gonorrhea	163	124	108	For the State
Syphilis	256	174	264	For the State

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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Vol. XXXIII AUGUST, 1943 No. 8

INADEQUATE ANTIDIPHTHERIA IMMUNIZATIONS

In spite of the fact that the means for nearly 100 per cent protection against dipththeria have been available for over a quarter of a century, there is still much left to be desired in the present status of prophylaxis against this disease. It is difficult to say just where the fault lies. Probably it is a joint responsibility of parents, health officers, and physicians. For a number of years campaign slogans emphasized, and rightly so, the importance of administering prophylactic injections in the latter part of the second six months of life. In most parts of the country this admonition has been well carried out. However, there are at least three criticisms which can be made of current practices. The first, and perhaps the most serious, is that there is still a tendency to use too few injections. The inadequacy of the one dose method using alum precipitated toxoid to produce a lasting immunity has repeatedly been pointed out, yet many persist in following this course. The minimum requirement for establishing the initial or basic immunity demands two doses of standard alum precipitated toxoid separated by several weeks, or three or more doses with several week intervals if fluid toxoid is used.

The second criticism is that the follow-up Schick test to determine whether or not a satisfactory immunity has been effected is too often neglected. In many instances both parents and physician accept the attitude that their task is completed with the giving of the prophylactic injections. However, there is abundant evidence to show that the immunity response varies widely in different people, and while the majority may develop an adequate protection, it does not follow that a particular method is successful in all instances.

The final criticism to which we would call attention is the tendency in some quarters to assume that one immunization course, although shown to be adequate at the time by a negative follow-up Schick test, is life lasting. Here again the duration of active immunity has repeatedly been shown to be variable. If immunity to diphtheria is to be adequate throughout life, it must be tested at intervals or, and probably better still, "booster" doses of antigen should be given from time to time. The Committee on Immunization of the American Academy of Pediatrics recommends that when the initial immunization procedure has been carried out in infancy, a second Schick test should be done at the beginning of school age and again when the child enters junior high school. Perhaps an even better practice is to administer a single "booster" dose of toxoid at these periods to be followed six months later in each instance by a Schick test.

Morbidity and mortality rates from diphtheria cannot be expected to be eradicated until children are adequately protected throughout their childhood years, from infancy to early adult life.

The dangers of inadequate antidiphtheria immunization are pointed out by Bullowa and Scannel in a report in the June 26 issue of the *Journal of the American Medical Association*. At the Willard Parker Hospital in New York City the authors found that 24 per cent of a sample group of two hundred previously immunized patients were Schick positive. During the period from January 1, 1940, through June 30, 1941, there were 88 patients with clinical diphtheria admitted to the hospital. Of these patients 32.9 per cent had previously been immunized. Follow-up Schick tests had not been done on any. A case is cited in which a delay of several days in administering antitoxin occurred because of a history of previous immunization. This study reported from one of the nation's outstanding contagious disease hospitals should serve as a sharp warning that the "tools" available for diphtheria prophylaxis are not being employed to their maximum efficiency.

MEDICINE IN POSTWAR YEARS

At the present and until the war has been won the entire might of the medical profession must be concentrated upon its war efforts, whether this be on the military or civilian fronts. However, there can be no harm and perhaps a great deal of eventual good in all of us attempting to keep abreast of the significant trends which are likely to affect our way of living in the postwar years. That the practice of medicine as we have known it in the past is in for profound changes in the

near future will, we believe, be agreed to by anyone who has given the matter any serious thought. Frankly, we are of the opinion that certain changes should come, and no one is more aware of this than the medical profession itself, which even now is experimenting extensively in various medical service programs.

Our only concern is that these changes shall be in such a direction that the public will be benefited and the medical profession not be hamstrung. It seems to us that the point we are trying to make has been very well put by Brigadier General Rankin in his article in the June 19 issue of the *Journal of the American Medical Association.*

The following is quoted from his remarks: "The complex connotations and inevitable implications which have suddenly loomed on the entire medical scene as a result of the drastic changes necessarily associated with war have been magnified by the tremendously forceful socioeconomic trends which characterize our time and which have preceded and still accompany the present military conflict. What effect the war will eventually have in hurrying some and retarding other developments remains conjectural, but that mighty influences are at work to effect epochal changes in the complexion of medical practice is incontrovertible. As physicians we are so engrossed in our purely professional and scientific interests that we are prone to neglect our rôle in current socioeconomic developments. Indeed some (too many) of us have been reluctant, even hostile, toward accepting this responsibility which is so eagerly desired by certain nonmedical groups. Such an attitude is no longer tenable and would actually jeopardize our vital function and altruistic aims so aptly expressed in a recent editorial in The Journal: 'The provision of optimum health through the widest possible application of the principles of preventive medicine and the treatment of disease, and through the best possible distribution of medical services . . . ' We must face realistically the ineluctable trends in the national and international social and economic structure—trends directionally signaled by already established signposts such as 'social security,' 'sick benefits,' 'unemployment insurance,' 'old age compensation' and various alphabetically captioned governmental agencies, and by recently lighted cressets such as certain postwar plans proposed by our government and other governments, which have already received much editorial comment. These and other widely discussed and intensively considered plans for cushioning the transitional shock from wartime to peacetime economy, and proposals for broadening the social security program and extending the nation's economic resources, merely delineate with increasing clarity the current trends in the nation's thoughts and ideas. That we are intimately involved and deeply concerned with these plans and proposals is clearly demonstrated by certain recommendations that the government, in cooperation with the medical profession, take action to enable the individual to budget medical expenses over a reasonable period and 'contribute toward the costs of care according to his ability,' and that federal aid be extended toward developing an adequate system of regional and local hospitals, maternal and child care and other measures to assure 'adequate medical and health care for all, regardless of place of residence or income status.' The elucidation of these proposals makes it quite apparent that the old system of medical practice will be considerably modified. Because of this, and the startling realization that the potentialities for both good and evil are so limitless and can be projected so far into the future of medicine both as a science and as an art, it becomes imperative in this transition period that the wise and tempered counsel of the medical profession exert its proper influence. There is some comfort and reassurance in the fact that our leaders are keenly aware of the significance and necessity for organization of medical services and participation in postwar planning.

"It is becoming more and more apparent that the responsibilities in the sphere of medical practice during the coming year will be a matter of ever increasing concern to us and will demand a degree of attention and a measure of effort far beyond that of our predecessors. The perspective and sound judgment which must come from our ranks cannot be gained without an intense interest, thorough knowledge and deliberate action on the part of every one sincerely concerned with the medical security of our country. Each of us must become thoroughly acquainted with the challenges now confronting medicine, challenges which will undoubtedly be multiplied when the current worldwide hostilities cease and the difficult reconstruction period begins. Our success in meeting these challenges will in large measure be determined and sharply delimited by the intelligence, perspicacity and zeal which we manifest in approaching and participating in the evolutionary process."

That the medical profession is aware of its responsibilities in having a voice in the future of American medicine is attested by the action of the House of Delegates at its recent meeting in Chicago when it established a Council on Medical Service and Public Relations which shall have as its functions:

"1. To make available facts, data and medical opinions with respect to timely and adequate

rendition of medical care to the American people.

"2. To inform the constituent associations and component societies of proposed changes affecting medical care in the nations.

"3. To inform constituent associations and component societies regarding the activities of the Council.

"4. To investigate matters pertaining to the economic, social and similar aspects of medical care for all the people.

"5. To study and suggest means for the distribution of medical services to the public consistent with the principles adopted by the House of Delegates.

"6. To develop and assist committees on medical service and public relations originating within the constituent associations and component societies of the American Medical Association."

MEDICAL CARE OF PERSONS RECEIVING OLD AGE PENSIONS*

At a recent meeting of the Medical Economics Committee, a discussion was held concerning the problem of medical care of persons receiving old age pensions. Dr. Channing Smith, Medical Consultant for the State Board of Social Welfare, appeared before the committee to explain the program and its probable expansion, and he was requested to prepare a concise article for THE JOURNAL. Dr. Smith submitted the following facts, which merit the careful study of all physicians in Iowa who render medical service to these persons.

"There never has been a perfect plan for supplying the medical needs of the poor, and we are aware of the fact that our plan is no exception. However, we are very anxious to perfect it as much as it is humanly possible to do so.

"The law provides for chronic medical care only to recipients of old age pensions. There is a federal law that all payments must be made to the recipient. A bill is now pending before Congress seeking to remove this restriction. Should this bill become a law, doctors could be paid directly for their services.

"The maximum amount of $5.00 medical allowance per month has been removed. We can now allow the full cost of chronic medical care if we can determine what that amount should be. When the information we receive from the county investigator and the doctor is very meager, the individual is granted the average amount which has been allotted in similarly diagnosed diseases.

"Recipients of old age pensions are indigent. Their budgetary needs and medical care are provided from tax money. The medical allowance is based upon the indigent fee bills and the use of the simplest remedies compatible with efficiency. We have no interest whatever in the kind or amount of medicine prescribed. However, the use of unnecessary and expensive medications penalizes both the patient and physician. Too often the purely degenerative diseases receive entirely too much treatment.

"When the allowance for the medical needs of a person receiving old age compensation proves to be insufficient, this fact should be reported by the physician to the county board of social welfare, which will pass on that information to the medical consultant of the State Board of Social Welfare. The case will then be reconsidered. Also, when the medical grant is not being properly used, that fact should be reported to the county board of social welfare and steps will be taken to insure the proper use of the allowance. Both of these corrective procedures are available to any physician who is rendering medical service to such individuals.

"On April 1, 1943, 19,172 recipients of old age pensions were receiving a medical grant at a cost of $807,211.00 yearly. The amount is now rapidly increasing."

It is Dr. Smith's desire, and also that of your committee, to work out the best possible program in the handling of these cases so that these individuals may have adequate medical care and the physician be reasonably compensated for this care. The problems in various parts of the state are often different. Your committee will appreciate any suggestions you can make toward improving the program. Have your county society secretary write us your opinions and suggestions concerning the program.

*From the Medical Economics Committee.

REPORT OF THE DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

The annual session of the House of Delegates of the American Medical Association was held in Chicago June 7, 8, and 9, 1943. At the second meeting, Tuesday morning, June 8, Dr. G. Henry Mundt, chairman of the Reference Committee on Credentials, reported that one hundred and seventy members of the House of Delegates had been registered. "All states, all sections, and the three government services have complete registration. The only delegates who are not in attendance are those from Alaska, the Isthmian Canal Zone, The Philippines and Puerto Rico."

Some of the noteworthy features of the meeting were:

1. The conferring of the Distinguished Service Medal and Award of the American Med-

ical Association for 1943 on Dr. Elliott P. Joslin of Boston.

2. The election of Dr. Herman L. Kretschmer as President-Elect of the American Medical Association.
3. The address of the Speaker, Dr. H. H. Shoulders.
4. The presentation and address of the recently appointed Surgeon General, Norman T. Kirk, United States Army.
5. The resolution establishing a Committee on Medical Service, presented by Dr. W. A. Coventry of Minnesota, with similar or supporting resolutions from Oklahoma, Section on Radiology, Indiana, New Jersey, Nebraska, and Ohio.
6. The supplementary report of the Board of Trustees and the report of Proceedings of the Joint Committee Meeting of National Hospital Associations and Representatives of the Board of Trustees of the American Medical Association.

All the world knows Dr. Joslin and his monumental contribution in the field of diabetes. The balloting was overwhelmingly in favor of Dr. Joslin.

The election of Herman L. Kretschmer as President-Elect was unanimous. As treasurer he has served the American Medical Association for ten years. Dr. Kretschmer has always been a great favorite in the House of Delegates.

The address of the Speaker, Dr. Harrison H. Shoulders, was concise and appropriate. His timely reference to Chapter IV, Section 4, of the By-Laws paved the way for a change in the time of election of officers and thereby made possible a three-day session instead of four. His expression of regret that he could appoint only fifty delegates to reference committees out of a membership of one hundred and seventy, emphasized one of the weaknesses of the organization. In this connection, however, the speaker urged every delegate to attend as many meetings of reference committees as possible and in this way exercise his prerogatives to the fullest extent. The Speaker made a fervent plea for medical statesmanship. In his carefully worded emphasis on the difference between "statesman" and "politician" we might find the answer to what is the matter with organized medicine.

To those who enjoy portrayal of action in preference to platitudes and preachments, the address of the Surgeon General, Norman T. Kirk, will find favor. His terse sentences and staccato manner of delivery commanded close attention on the part of the entire assembly. The address is published in full in the June 19 issue of the *Journal of the American Medical Association.*

The House of Delegates of the Iowa State Medical Society, at the time of its meeting last April, instructed its delegates to the American Medical Association to support the resolution presented by Dr. Coventry. This was done. Considerable preliminary discussion took place before the opening of the session. The resolution presented by Dr. Coventry, together with similar resolutions, was referred to the Reference Committee on Legislation and Public Relations. Nearly one hundred delegates were present at the hearing before this committee. The ordinary committee room was much too small for this gathering and it became necessary to adjourn to the Red Lacquer Room where the general session had been held in the forenoon. The discussion lasted three hours. When the chairman of the reference committee, Dr. Thomas A. McGoldrick, asked what support might come from other states, the favorable response was large. The committee submitted the following recommendation:

"A Council on Legal Medicine and Legislation shall be created at once, this Council to be composed of six members of the American Medical Association geographically distributed over the United States, the President, the Secretary, the immediate Past President, and a member of the Board of Trustees of the American Medical Association. The six members from the American Medical Association, for the first year, shall be appointed by the Board of Trustees. Your reference committee recommends that the term of membership on the Council be three years, provided that at the end of the first year there be an election of two members for one year, two for two years and two for three years. After the first year the Board of Trustees shall present to the House of Delegates for election to membership on this Council a list of three nominees for each vacancy and the Chairman shall be selected by the Council from its elected members.

"The duties of the Council shall be to make available all facts, data, and medical opinions with respect to timely and adequate rendition of medical care to the American people and to keep informed the constituent state medical associations and component county medical societies of all proposed changes affecting medical care in the nation and also the activities of the Council. The present Bureau of Legal Medicine and Legislation shall be made a part of this Council, and the Board of Trustees shall provide adequate facilities for these activities."

The House of Delegates, meeting in executive session Tuesday afternoon, approved the action

of the reference committee in recommending establishment of a Council on Legal Medicine and Legislation, but tabled an amendment providing an office in Washington for the newly created Council. The House also approved the report of the Reference Committee on Amendments to the Constitution and By-Laws which recommended the establishment of a Council on Medical Care, and referred this recommendation and the one on creation of the Council on Legal Medicine and Legislation to the Board of Trustees with the request that the Board consider the various boards existing and just established and bring in some clarifying statement as to the status of all of them.

The Board of Trustees met with both reference committees Tuesday evening for this purpose, and as a result proposed the formation of a Council on Medical Service and Public Relations which would utilize the functions and personnel of the Bureau of Legal Medicine and Legislation, the Bureau of Medical Economics, and the Department of Public Relations. Membership on and formation of this Council was to be in accord with the recommendation made Tuesday afternoon by the reference committee, and the duties of the Council were expanded to include many medical economic and public relation problems.

This proposal of the Board of Trustees received the affirmative vote of the House of Delegates, and the Board of Trustees lost no time in setting up the new Council on Medical Service and Public Relations, appointing the following members: Dr. James E. Paullin of Atlanta, Georgia, President; Brigadier General Fred W. Rankin of Lexington, Kentucky, retiring president; Dr. Olin West of Chicago, secretary; Dr. Roger I. Lee of Boston, chairman of the Board of Trustees; and as members-at-large Doctors Louis H. Bauer of Hempstead, New York; James R. McVay of Kansas City, Missouri; E. J. McCormick of Toledo, Ohio; W. S. Leathers of Nashville, Tennessee; Alfred W. Adson of Rochester, Minnesota; and John H. Fitzgibbon of Portland, Oregon.

To the many doctors who are interested in what constitutes hospital service in contradistinction to professional service, the Supplementary Report of the Board of Trustees will be interesting. This exhaustive document leaves no doubt as to how the American Medical Association stands on this controversial issue. The American Medical Association is unalterably opposed to the practice of medicine by hospitals.

Arthur D. Woods, M.D., Delegate

WASHINGTON OFFICE FOR THE AMA?*

By far the most discussed subject, and to our way of thinking the least satisfactorily answered problem at the meeting of the House of Delegates of the American Medical Association at Chicago early in June was the question of whether or not a Washington office should be established, that the problems of organized medicine on the one hand might be made known to Congress and the multitudinous government agencies, and on the other that the plans and purposes of these federal groups relative to national medical care might be more clearly interpreted for the profession and the public by organized medicine.

The main objections to the creation of such an office stemmed from the officers of the AMA and some delegates who cited the possibility of a lowering of medical ideals by virtue of the fact that such an office might be construed as a lobby for medicine, and who pointed out that the exemption of the AMA from federal income and social security taxes would be jeopardized. They felt that the AMA might be reclassified as exempt from income tax as an association of persons in a profession organized and operated for the betterment of the profession through numerous methods rather than an association organized and operated exclusively for scientific, literary or educational purposes. Both these objections, in our opinion, are not well grounded.

In the first place other professional organizations have Washington offices and there have been no unfavorable repercussions. The hospital association has such a bureau, and a year ago the American Dental Association appropriated funds to create an office in the Capitol city which is carrying on an excellent service for its members. The idea that every national group that takes an active interest in legislation affecting its members and the public endangers its standards is a bit archaic.

In the second instance we are at a loss to comprehend the fear that a Washington office would put the AMA in the treasury department's category of a business league, chamber of commerce, real estate board, or board of trade, all of which are exempt from income tax as being not organized for profit and no part of the net earnings of which inure to the benefit of any private shareholder or individual. We know of several state medical societies in such a category, and our own Association is so listed today, yet we and similar medical groups are not business leagues actually, and are certainly as exclusively

*From the July, 1943, issue of Providence Medical News.

organized for scientific and educational purposes as the national society. The American Medical Association was in a position to contest the opinion of its status with the aid of expert legal counsel; we and other medical societies have not been in a position to do so, and we have had to abide by the rulings of the treasury department. How inconsistent then is the objection when one realizes that the same doctors who form the county society and also the national association are in the one instance in a business league and in the other in a non-business group, yet engaged in the same activities?

The proponents of the plan for a Washington bureau advanced no less than six resolutions. Some proposed a committee on medical service with the Capitol city office and a full-time director as an adjunct. One resolution, emanating from the Minnesota State Association, attempted to establish a committee with geographic representation, the members being elected by regional groupings of the delegates—thus the delegates from New England (of whom those from Massachusetts outnumber the total of the other five states) would elect one member to the committee. Some of the resolutions would apparently have the Washington bureau as a reference or informational office; others as a legislative bureau.

On the final day of the session, following free discussion of the proposals, the reference committee recommended, and the House adopted, a plan whereby a Council on Medical Service and Public Relations is established. The new Council will have six members geographically distributed over the country, together with the President, the immediate past president and the secretary of the AMA, and one member of the Board of Trustees. The six members will be appointed for this year by the Trustees, and thereafter the House of Delegates will elect them from nominees submitted by the Trustees.

The new Council will have a permanent secretary employed by the Trustees, and the legislative bureau and the medical economics bureau presently in operation will continue to function as in the past, and although not a part of the Council they will serve as affiliated units. Primarily the Council will be imposed with the task of keeping the state and county societies informed more completely of all proposed changes affecting medical care in the nation, by making known all facts and data regarding medical conditions.

The resolutions calling specifically for a Washington bureau were voted down, and apparently it lies within the jurisdiction of the Board of Trustees and the new Council on Medical Service and Public Relations to establish a Washington office if they deem it advisable. Frankly we feel that the main issue was side-tracked. We are in accord with the plan for the new Council, and we feel certain that it will fill an important need. But unless this Council gets close to the Washington scene the medical profession of America is going to have a great deal to answer for when the more than forty-six thousand doctors with the armed forces come home at the war's end. With some 35 federal agencies in Washington boasting medical programs of one sort or the other, with far reaching social security legislation already proposed to Congress, and with tremendous outlays of money being expended to create new medical and hospital programs, it is imperative that organized medicine, through the American Medical Association, take an aggressive leadership.

The task cannot be left for others to perform. The National Physicians Committee, for example, claimed credit for a legislative program whereby congressional candidates issued statements of support of organized medicine. But where were those congressional supporters two weeks ago when the House of Representatives passed H. R. 2935 with the provision that appropriations for the Children's Bureau must be available to all persons licensed under state laws to practice obstetrics, thus preventing the individual states from restricting the service to the best possible care, and thus giving unwarranted status to unqualified sectarian healers who are ineligible for other state and federal health programs, and thereby preventing the individual states from governing their own policies for the best administration of local medical care?

To the county and state medical societies truly belongs the task of determining the extent and method of administration of medical care throughout the nation, but unity of thought and purpose for these groups can only be crystallized by intelligent factual and far seeing information on the activities of Congress and all Washington agencies sponsoring health programs. Washington office or not, the American Medical Association has a task to perform to get this authoritative information to every group, and upon its success to do so will rest in no small measure the future pattern of American medicine.

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Some Wartime Public Health Problems*

ROBERT HUGHES PARRY, M.D.
Medical Officer of Health, Bristol, England

Bristol is not without its medical traditions; in fact, Edward Jenner practiced there, and ever since then Bristol has been the headquarters of the Anti-Vaccination League. William Budd also practiced in Bristol, and the old St. Peter's hospital of which we were all so proud, which was a priceless gem, has been burned to the ground.

Not all the history of Bristol has been savory. It was very prominent during the slave trade, and we still have some of the old tunnels (near the most beautiful church in Great Britain, St. Mary Radcliffe) where the slaves were shipped.

I had the honor of being received at Bristol, Connecticut, and it was one of my greatest pleasures. When I told them I was a true Bristolian, I had to explain, because they had never heard that word. Bristolian refers to one of the early nationalities that lived in Great Britain. It was said in the old days that the Bristolian always slept with one eye open. Perhaps that was why, before the blitz, Bristol was a city of churches; people made a lot of money from the slave trade but they wanted to make sure that they had the other insurance covered as well.

Just before the war we went through a period of revolution in that old city. I was prevailed upon to become Medical Officer of Health thirteen years ago at the time when the old Guardians of the Poor were abolished, and these services in the future were to be given by the local city council. Since the last war we have done a great deal of social welfare work, improving the conditions of the people and giving them a chance in life. As an example, I can tell you that some 36,000 houses were built in that city, nearly half of them at the expense of the taxpayer. We did not believe in tenement dwellings. I do not think that a family man can live and bring up a happy family in a flat. We think now that we made many mistakes. We have always made mistakes. We made a mistake in this big housing scheme; we paid too much attention to the wage earner. I think that the home has a significance which we do not appreciate. The home is first of all the workshop of the mother; second, the nursery of the baby; and third, the sleeping quarters of the wage earner. We have always put them in the opposite order, with the result that the other demands have made us cut down the size of the kitchen and make the house a bad workshop and a bad nursery and so unsatisfactory as a home that the father has had to seek some escape by going into public houses or taverns. I think one of the greatest things the College of Surgeons has done is to publish a paper on housing, giving medical reasons why modern houses should be built on modern lines, giving the importance in the right order. Well, since those days we have had the war and I must tell you briefly what that has meant to us.

From the middle of 1940 until the middle of 1941 we had approximately 550 alerts. An alert means that not only do the sirens go but usually within the next twenty minutes, guns go. It is difficult in the dark to tell the difference between a gun and a bomb. During that period about 80,000 houses, involving about 300,000 people, were damaged, either by bombs or shrapnel or by blast. Approximately 5,000 buildings were completely destroyed. During that time some 1,300 or 1,400 persons were killed and a greater number injured, some seriously. You can imagine what the public health problems of our city were as the result of this bombing. There was a complete change in the family life of the city; that has happened in all the big cities of our country. I should like to mention some of the factors which caused this terrific change in our family life. First, young men were called. I hope you will not experience all the problems we have had to face—the absence of young men away from the home on duty. Naturally they were very much missed by the people who were left, most of all the young fathers. They were missed because some of them gave a hand in the normal routine of home life. With them went the mother's help. With them also went a good deal of the stability of the home—the moral stability, particularly the discipline among the children. That is one of the reasons we have had the problem of juvenile delinquency which has increased nationally in Great Britain, by 41 per cent of the children under fourteen years of age and 22 per cent of those from the ages of fourteen to seventeen. There were other factors: the mother often spent a good part of her time in war work and, of course, the shutting up of the schools when they were bombed, and evacuations. It caused a great disappearance of our youth clubs. We would have been much better off if we had maintained recreational facilities, and it is one of the things we intend to do when the war is over.

*Presented before the Seventeenth Annual Meeting, Iowa Public Health Association, Des Moines, April 27 and 28, 1943.

You are interested in this part of the work but I cannot discuss it with you this evening. Some of our officers in the Child Guidance Clinic in Bristol have written an excellent article on the results of juvenile delinquency. I do not like too much stress on juvenile delinquency; I wonder, as a matter of fact, how many of us in this room have not been delinquent at some time. I am told that about 90 per cent become useful citizens, and that is what matters in the long run.

The father was missed more during the blitz than at any other time and it made an enormous difference to the mental stability of the home. The mother had to look after the children; she had the responsibility of doing everything. The trouble was that the raid usually started at bath time, which caused a catastrophe. There is usually very little inducement at bath time and therefore any excuse is welcomed. The mother thought that they could get along with just a little wet rag about the face and get ready to go to the shelter. Shelter life became very general and the history of the evolution in our conditions is interesting. The government in London thought at first that the protection of the communities was a matter for people who had experience with making trench warfare and considered trench shelters the most satisfactory. I still have an enormous confidence in trench shelters. Such a place, however, is not where one wishes to spend six to twelve hours in the middle of the night in winter and not where you should live under those conditions. It took a lot of persuading of the military authorities that a trench shelter could not be made damp-proof, heated properly, and roofed, and that it was a poor place for the mother of a baby to climb into in the middle of the night.

Some of us thought the best thing was to disperse the people for health reasons. The military authorities agreed that dispersement was advisable. We wanted to leave families in homes where they might have more comforts, where they might sleep through it all. I have four children of my own and they have been in Canada three years. They were present during the first raids. Our little ten-year-old, under the dining room table during an air raid, suddenly whispered to me, "Isn't this thrilling? We are having a real air raid!" The result of the experience was to prove that the medical aspect was the right aspect.

It is extraordinary how many families crept out from under the stairs. In one night's raid we had approximately 10,000 houses damaged and about 450 completely destroyed, but we had only 225 people killed and about the same number severely injured, so that all that was wanted in these conditions which I have described was something to keep the house up so that it would not smother the inhabitants.

If you ever come to Bristol during a blitz you have to make up your mind there is no protection from a direct hit. It is different from some cities like London where they have great underground shelters. We have nothing of that kind, and therefore we do not intend to worry about the direct hit.

I want to stress the remarkable work of the women. It is on them during the husband's absence that the care of the children falls, and if there is any credit to anyone in Bristol for what they have tried to do during the last four years, I think most of it should go to the women who have done a very fine service during the raids while having the responsibility of looking after the home and family. Then, of course, we have the women themselves absent from home. It is true we do not encourage war work among women with small children. Children are the greatest cause of poverty in our city as, indeed, throughout the whole country. I should like to tell you how having a family brings you down economically in Great Britain, and if there is a disgrace in our nation it is that one. It is for this reason we recommend that the British government accept responsibility to provide an insurance against want. Sir William Osler said there are five obstacles in the way of construction: want, ignorance, disease, squalor, and idleness. This scheme of insurance cannot work unless the government of the country undertakes three things: (1) to keep the people employed; (2) to give a family allowance so that to have a child does not mean that you become economically dependent in the community, and (3), a very important factor would be a comprehensive medical service including rehabilitation.

There is the absence of the young women, a particular problem which has cropped up and which is getting worse every day. So much was done for the older people in the household by the young women; and when the health of the aged broke down, there was no one to care for them. There is a great demand for nursing homes where old people can be looked after. We are unable to provide this, but it is one of the crying needs at the present time.

We are doing all we can to care for the children of the women who have to work, and for that reason we are establishing wartime nurseries and are keeping open our nursery schools and day nurseries to care for these children while their mothers do war work.

Another great change that came to the city was

evacuation. After a little bombing the government decided it would be best to move some of the people from the city and they agreed that there should be four classes of people who should be evacuated. I can speak of the city as an evacuation area. Perhaps you will get a chance over here to know how it feels to be in a country cottage with some children dumped upon you. The four groups of people were the mothers and children under five, children from five to fifteen, the children under five by themselves, and the aged and infirm. The government undertook to look after only two of these groups; the five to fifteen year old children who were evacuated and billeted on the country farms, and the children under five for whom expenses were to be paid if we could find back-country mansions which we could take over and convert into residential nurseries. Now we have some forty to fifty residential nurseries managed by a matron and ten to fifteen with a head teacher in charge. They accommodate about thirty children under five years of age. The problem of evacuating 50,000 children from the city was no small one. We officially evacuated 25,000, although no doubt many went of their own accord. We undertook that no small child would be officially evacuated unless he was clean and well clad and healthy, and it was no mean job to achieve this aim. . We found that shelter life entered closely into the life of a family. We found that no less than 20 per cent of the children had something wrong. About 15 per cent had "vermin heads," many had scabies (about 7,000 cases of scabies in the city) and those other conditions you associate with dirt. We had great help from America, help you gave us consciously and unconsciously. You sent us bundles which helped to clothe children and send them out properly clad, and nearly all of that came from yourselves and your kind fellow-countrymen. We found that you had a marvelous drug for killing head lice and it has been to my utter amazement that you did not know the value of the drug which you were exporting to us, lethane, 384 special, formerly of value in our horticultural department for the spraying of apple trees.

After some of the blitzes, food supplies were destroyed; and I want to tell you that that was one of our big problems—not what to do during the raid but what to do afterwards, how to clean up after a raid. We had as many as fifty-two water mains destroyed in one night, sixty gas mains, six hundred house connections damaged, and twelve or more high voltage cables destroyed in one raid—one-half of the city without heat, light, or water supplies. One of the big problems was the destruction of our food supplies. When the warm weather came we were pestered with flies. I had a very good friend, an entomologist in the Research Department of the University, and he at once came to the rescue and found this drug which I mentioned very valuable for killing house flies. He thought it would be a good plan if we could kill their cousins in the heads of our school children; so we concocted a mixture of 40 per cent paraffin and made a wonderful brilliantine. It could even be scented, and we found that this undoubtedly killed all head lice, including nits, and would have good effects nearly a week after application. You gave us that quite unconsciously, but it has been one of our greatest assets throughout the whole of this trouble.

This shelter life about which I was telling you is one of our great bugbears during air raids. We have done our best to disperse the people, and now we have what is described as a Morrison table shelter. It consists of a strong steel plate on four legs connected with girders. It will be on the ground floor so that when a bomb falls in the neighborhood, you stay under the table provided you do not get a direct hit. It is of no benefit, of course, if you have a direct hit. I have a dread of basements. It is one of the biggest rescue problems we have had to face. If the house comes down, it is difficult to get at those who are down in the basement. We have another little dome shelter, the Anderson shelter. We are afraid of placing a dome shelter inside a house for fear of fire; but fire is not such a great peril. We can usually manage the incendiary bombs, except those which carry the charge with them. The Anderson shelter also is a small family shelter, the small semicircular shell cover which you put over a trench in your own back yard; however, it is not the place for a child to sleep during the cold winter nights. The vast majority of the people are protected by brick shelters outside. It is not possible to give them a family shelter. It is an ordinary plain brick wall, 14 inch cement, together with about 8 inch reinforced concrete wall. When a bomb falls, the whole thing topples over and does not collapse. Many of these bricks shelters accommodate twenty to fifty people. These shelters had to have some amenities in them in order to provide certain conveniences. We fitted them with tiers of bunks, and we had little cots for the children. You can imagine what you face to go against public health rules and regulations, trying to get twenty people into a space in which not one of you would like to be alone for twenty-four hours. We had to set up for these shelters a complete public health service in itself. We had to

have a shelter marshal to see that people would occupy the right bunk and not quarrel. We arranged for two doctors to look after each division of the city. These doctors were on call, so that if they were wanted they would go there and report for a case. We wanted at least fifty nurses who were not obtainable, so we trained some of our willing women and they took charge, and we tried to have a nurse to visit each shelter every night. We equipped each shelter with an American Red Cross pack, and it was very much appreciated. Then, of course, we had to arrange heating and lighting of the canteens and first aid equipment in each of the rooms. We took other precautions: sprayed the atmosphere with 1 per cent hypochlorite every day, used the wonderful lethane daily to keep bugs away from the bunks, and then we put some tar disinfectant with sawdust on the floor.

I should like to mention some other public health problems we have had.

When the war broke out we did many queer things. We had one-quarter of a million patients with active tuberculosis in the country and, of course, these people are sensitive to environmental changes and crowds. The death rate from June, 1939, to June, 1940, went up by 6 per cent, and from 1940 to 1941 by 10 per cent until it reached its peak in the middle of 1941. We were not very surprised about that. We did not know what to expect from a bombing; we did not have sufficient hospitals and decided to make room for the injured persons by evacuation of hospitals, clearing out many of our sanatoriums, and sending patients back to their homes. We expected a rise in the death rate of tuberculosis, especially tuberculous meningitis in young children. However, its peak was reached in 1941 and has been steadily falling. We have an increased incidence which has been steadily rising, and we expect the death rate, if we have anything like influenza, to rise again.

Dr. Stock, our greatest statistician, states that the war has already cost us 11,000 deaths from tuberculosis, taking into account the fact that the death rate was falling steadily until the war came along.

There has been an increase of about 50 per cent in the cases of venereal disease since 1939. We have taken energetic action. I think we will get through, with a grim determination that we are going to do something about it. The first problem was the sailor. We are providing a clinic on the spot for sailors so that they can be treated on the docks. The Welfare Committee of Sailors, which did not come into existence until recently (to our national disgrace), provided amenities for those homeless persons who are doing so much for your country and for mine. I sincerely hope that in the future we will not forget the sailor and what he has done and what he is doing in this war.

A revolution occurred in this particular problem and an act of Parliament gave power to the local officer of health so that in the event a person is the source of infection of two or more persons, he can be taken and placed under treatment.

I could spend a long time telling you of the things we did not have, but I could not tell you why we did not have other things, such as typhus or influenza, from so much congestion in the shelters. The only epidemic was para-typhoid (caused by artificial ice cream), in which we had the invaluable assistance of the Harvard unit.

The health of Bristol last year was the best in the history of that city. We cannot obtain statistics, but we had a record birth rate, and with that record birth rate we had the lowest infant mortality rate in the history of the city, 39 per 1,000 births. So in spite of Hitler and his worst, I think we have a lot for which to be thankful. The infant mortality rate is the best index of civilization. I am proud to tell you that through the struggle we have been able to maintain our civilization in our old city.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

Meeting of the Board of Trustees
June 20, 1943

The Board of Trustees of the Iowa State Medical Society met in the central office in Des Moines, Sunday morning, June 20, 1943, with the following persons present: Trustees O. J. Fay, John I. Marker, and W. A. Sternberg; L. R. Woodward, president; M. C. Hennessy, president-elect; R. D. Bernard, past chairman of the Committee on Public Policy and Legislation; E. C. McClure, chairman of the Finance Committee; and Channing G. Smith, Medical Consultant to the State Board of Social Welfare.

The meeting was called to order by the chairman at nine-thirty a. m.; minutes were read and approved and bills were authorized; accounts of the Legislative Committee were audited and approved; contract for publishing the Journal in 1944 was awarded to the Wallace-Homestead Company; and appointments were made to fill vacancies on State Society committees. Meeting adjourned at eleven a. m.

Roster of Iowa Physicians in Military Service

As of July 24, 1943

Adair County

Cornell, D. D., Greenfield (APO 41, San Francisco, Cal.) ..... Capt., A.U.S.
Gantz, A. J., Greenfield (APO Los Angeles, Cal.) .. Capt., A.U.S.

Adams County

Willett, W. J., Carbon (Camp Maxey, Tex.) ..... Capt., A.U.S.

Allamakee County

Hogan, P. W., Waukon
Ivens, M. H., Waukon (Camp Shelby, La.)
Kiesau, M. F., Postville (Jefferson Barracks, Mo.) .. Major, A.U.S.
Rominger, C. R., Waukon (Camp Claiborne, La.) ..... A.U.S.

Appanoose County

Condon, F. J., Centerville (Owensboro, Ky.) .. Major, U.S.P.H.S.
Edwards, R. R., Centerville (Trenton, N. J.) ..... 1st Lt., A.U.S.
Huston, M. D., Centerville (Kansas City, Mo.) ..... Capt., A.U.S.

Audubon County

Koehne, F. D., Audubon (Oroville, Wash.)

Benton County

Koontz, L. W., Vinton (Carmel, Cal.) ..... Capt., A.U.S.
Senfeld, Sidney, Belle Plaine

Black Hawk County

Bickley, D. W., Waterloo (Camp Howze, Texas) .... 1st Lt., A.U.S.
Bickley, J. W., Waterloo (Fort Sill. Okla.) ..... 1st Lt., A.U.S.
Butts, J. H., Waterloo (Galveston, Texas) ... Lt. Comdr., U.S.N.R.
Cooper, C. N., Waterloo (Seattle, Wash.) ... Lt. Comdr., U.S.N.R.
Ellyson, C. D., Waterloo (Pensacola, Fla.) ..... Lt., U.S.N.R.
Hartman, H. J., Waterloo (APO 33, Los Angeles, Cal.) ..... Capt., A.U.S.
Henderson, L. J., Cedar Falls (Camp Roberts, Cal.) . Capt., A.U.S.
Hoyt, C. N., Cedar Falls (McClellan Field, Ala.) . 1st Lt., A.U.S.
Ludwick, A. L., Waterloo (APO 813, New York, N. Y.) ..... Capt., A.U.S.
Marquis, F. M., Waterloo (APO 180, Los Angeles, Cal.) ..... Capt., A.U.S.
O'Keefe, P. T., Waterloo (Nashville, Tenn.) ..... Capt., A.U.S.
Paige, R. T., LaPorte City (Des Moines, Ia.) . Lt. Comdr., U.S.N.R.
Rohlf, E. L., Jr., Waterloo (APO New York, N. Y.) ..... 1st. Lt., A.U.S.
Seibert, C. W., Waterloo (Fort Wright, Wash.) Capt., A.U.S.
Smith, E. E., Waterloo (Scott Field, Ill.) ..... Major, A.U.S.
Smith, R. I., Waterloo (Reno, Nevada) ..... Capt., A.U.S.
Smith, R. G., Cedar Falls (APO 512, New York, N. Y.) ..... Major, A.U.S.
Trunnell, T. L., Waterloo (care P.M., New York, N. Y.) ..... Lt., U.S.N.R.

Boone County

Brewster, E. S., Boone (Camp Chaffee, Ark.) .... Major, A.U.S.
Healy, M. J., Boone
Shane, R. S., Pilot Mound (Des Moines, Ia.) Lt. Col., A.U.S.

Bremer County

Amlie, P. J., Tripoli (Fort Knox, Ky.)
Blum, O. S., Waverly (Bremerton, Wash.) ..... Lt., U.S.N.R.
Rathe, H. W., Waverly (Fort Jackson, S. C.) ..... Capt., A.U.S.
Shaw, R. E., Waverly (Carlisle Barracks, Pa.) .... 1st Lt., A.U.S.

Buchanan County

Barton, J. C., Independence (St. Paul, Minn.) ... Lt. Col., A.U.S.
Hersey, N. L., Independence (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Leehey, P J., Independence (APO 957, San Francisco, Cal.) ..... Capt., A.U.S.
Loeck, J. F., Aurora (Camp Rucker, Ala.) ..... Capt., A.U.S.

Buena Vista County

Almquist, R. E., Albert City (Camp Shelby, Miss.) . Capt., A.U.S.
Brecher, P. W., Storm Lake (Camp White, Ore.) . Lt. Col., A.U.S.
Mailliard, R. E., Storm Lake (Camp Bowie, Tex.) . Lt. Col., A.U.S.
Shope, C. D., Storm Lake (Fort Des Moines, Ia.) 1st Lt., A.U.S.
Witte, H. J., Marathon (Omaha, Neb.) ..... Major, A.U.S.

Butler County

Anderson, B. V., Greene (Fleet PO, Seattle, Wash.) .... U.S.N.R.
James, R. A., Allison (Mare Island, Cal.)
Rolfs, F. O., Parkersburg (Springfield, Mo.)

Calhoun County

Grinley, A. V., Rockwell City (APO 507, New York, N. Y.) ..... Capt., A.U.S.
Hobart, F. W., Lake City (Camp Grant, Ill.) .... Capt., A.U.S.
Peek, L. H., Lake City (Jefferson Barracks, Mo.) .. Capt., A.U.S.
Stevenson, W. W., Rockwell City (Port Hueneme Cal.) ..... Lt. Comdr., U.S.N.R.
Weyer, J. J., Lohrville (Camp Carson, Colo.) .... 1st Lt., A.U.S.

Carroll County

Anneberg, A. R., Carroll (Camp Barkeley, Texas)
Anneberg, W. A., Carroll
Cochran, J. L., Carroll (Gulfport, Miss.)
Cross, D. L., Coon Rapids ..... Lt., U.S.N.R.
Freedland, Maurice, Coon Rapids
Morrison, J. R., Carroll (Camp Maxey, Texas) ..... Capt., A.U.S.
Morrison, R. B., Carroll (APO 634, New York, N. Y.) Capt., A.U.S.
Pascoe, P. L., Carroll (Bowman Field, Ky.) ..... Capt., A.U.S.
Scannell, R. C., Carroll (APO, New York, N. Y.)
Tindall, R. N., Coon Rapids
Wyatt, M. R., Manning (Desert Center, Cal.) .... 1st Lt., A.U.S.

Cass County

Egbert, D. S., Atlantic (Fort Snelling, Minn.) Major, A.U.S.
Longstreth, C. M., Atlantic (Norman, Okla) . Lt. Comdr., U.S.N.R.
Needles, R. M., Atlantic (Davis, Cal.) ..... Capt., A.U.S.
Petersen, M. T., Atlantic (Topeka, Kan.) ..... Capt., A.U.S.

Cedar County

Laughlin, R. M., Tipton (San Diego, Cal.) ..... Lt., U.S.N.R.
Mosher, M. L., West Branch (Camp Gruber, Okla.) ..... Capt., A.U.S.
O'Neal, H. E., Tipton (APO 254, Los Angeles, Cal.) ..... Lt. Col., A.U.S.

Cerro Gordo County

Adams, C. O., Mason City (Brigham City, Utah) ... Capt., A.U.S.
Egloff, W. C., Mason City (Mesa, Ariz.)
Flickinger, R. R., Mason City (Carlisle Barracks, Penn.) ..... 1st. Lt., A.U.S.
Hale, A. E., Dougherty (Camp Hale, Colo.)
Harris, R. H., Mason City (Columbus, Ohio)
Harrison, G. E., Mason City (Boston, Mass.) ..... Col., A.U.S.
Houlahan, J. E., Mason City (Sacramento, Cal.)
Lannon, J. W., Clear Lake (APO 668, New York, N. Y.) ..... Capt., A.U.S.
Long, D. L., Mason City (Santa Ana, Cal.)
Marinos, H. G., Mason City (APO 25, San Francisco, Cal.) ..... Capt., A.U.S.
Sternhill, Irving, Mason City (APO New York, N. Y.)

Cherokee County

Bullock, G. D., Washta (Camp Livingston, La.) .... Capt., A.U.S.
Ihle, C. W., Jr., Cleghorn (Camp San Luis Obispo, Cal.) ..... Major, A.U.S.
Noble, R. P., Cherokee (APO 634, New York, N. Y.) . Capt., A.U.S.
Swift, C. H., Jr., Marcus (Fort Bliss, Texas) .... Capt., A.U.S.

Chickasaw County

Caulfield, J. D., New Hampton (Denver, Colo.) .... Capt., A.U.S.
Murphey, A. L., Fredericksburg (APO 3470, San Francisco, Cal.) ..... Capt., A.U.S.
O'Connor, E. C., New Hampton (Camp Crowder, Mo.) ..... Capt., A.U.S.
Richmond, P. C., New Hampton (Camp Gruber, Okla.) ..... Capt. A.U.S.

Clay County

Adams, G. W., Royal (Fort Clayton, Panama Canal Zone)
Edington, F. D., Spencer (Lowry Field, Colo.) ..... Col., A.U.S.
Jones, C. C., Spencer (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
King, D. H., Spencer (Spokane, Wash.) ..... Capt., A.U.S.

Clayton County

Anderson, H. M., Strawberry Point (Camp Crowder, Mo.) ..... 1st Lt., A.U.S.
Rhomberg, E. B., Guttenberg (Camp Wallace, Texas) . Capt., A.U.S.

Clinton County

Amesbury, H. A., Clinton (Vancouver, Wash.)
Burke, J. C., Clinton (Great Bend, Kan.) ..... A.U.S.
Ellison, G. M., Clinton (Washington, D. C.) ..... 1st Lt., A.U.S.
Hill, D. E., Clinton
King, R. C., Clinton (Camp Chaffee, Ark.)
Lenaghan, R. T., Clinton (Fleet PO, San Francisco, Cal.) ..... U.S.N.R.
Meyer, A. K., Clinton (Denver, Colo.)
Norment, J. E., Clinton (Mare Island, Cal.)
Riedesel, E. V., Wheatland (Fort Douglas, Utah)
Snyder, D. C., De Witt
Van Epps, E. F., Clinton (Palm Springs, Cal.) ..... Capt., A.U.S.
Waggoner, C. V., Clinton (Seattle, Wash.) .. Lt. Cmdr., U.S.N.R.

Crawford County

Fee, C. H., Denison (Dunnellon, Fla.) ..... Capt., A.U.S.
Grau, A. H., Denison ..... Lt. Comdr., U.S.N.R.
Maire, E. J., Vail (San Francisco, Cal.)
Wetrich, M. F., Manilla (San Antonio, Tex.)

Dallas-Guthrie Counties

Byrnes, A. W., Guthrie Center (Fort Custer, Mich.) . Major, A.U.S.
Fail, C. S., Adel (Pacific Beach, Wash.) ..... Lt., U.S.N.R.
Margolin, J. M., Perry (Camp Cooke, Cal.) ..... Capt., A.U.S.
McGilvra, R. I., Guthrie Center (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Mullmann, A. J., Adel (Washington, D. C.) ..... Capt., A.U.S.
Nicoll, C. A., Panora (Camp Chaffee, Ark.) ..... Capt., A.U.S.
Osborn, C. R., Dexter (San Francisco, Cal.) ..... Lt., U.S.N.R.
Todd, D. W., Guthrie Center (Camp McCoy, Wis.) ..... 1st Lt., A.U.S.
Wilke, F. A., Woodward (APO 627, New York, N. Y.) ..... 1st Lt., A.U.S.

Davis County

Fenton, C. D., Bloomfield (Carlisle Barracks, Pa.)..Capt., A.U.S.

Decatur County

Doss, W. N., Leon (APO 924, San Francisco, Cal.)
Gamet, E. E., Lamoni (Tacoma, Wash.)

Delaware County

Baumgarten, Oscar, Earlville (APO 307, Los Angeles, Cal.).A.U.S.
Clark, R. E., Manchester (Fort Riley, Kan.)....1st Lt., A.U.S.

Des Moines County

Eigenfeld, M. L., Burlington (Camp Chaffee, Ark.).1st Lt., A.U.S.
Heitzman, P. O., Burlington (Fort Leonard Wood, Mo.)
Jenkins. G. D., Burlington (West Point, N. Y.)....Lt. Col. A.U.S.
Lohmann, C. J., Burlington (Fort Lewis, Wash.)..Major, A.U.S.
McKitterick, J. C., Burlington (Davisville, R. I.) .....Lt. Comdr., U.S.N.R.
Moerke, R. F., Burlington (Abilene, Texas).....1st Lt., A.U.S.
Sage, E. C., Burlington.....Lt. Comdr., U.S.N.R.

Dickinson County

Buchanan, J. J., Milford (Fleet PO, New York, N. Y.) .....Lt. Comdr., U.S.N.R.
Henning, G. G., Milford (Camp Adair, Ore.).....Major, A.U.S.
Nicholson, C. G., Spirit Lake (Sawtelle, Cal.).....Capt., A.U.S.
Rodawig, D. F., Spirit Lake (Fort Hancock, N. J.) .. ..Capt., A.U.S.

Dubuque County

Beddoes, M. G., Cascade (Kansas City, Mo.)....Capt., A.U.S.
Conzett, D. C., Dubuque (Fort Riley, Kan.).....Lt. Col., A.U.S.
Cunningham, J. C., Dubuque (Meridian, Miss.) Capt., A.U.S.
Edstrom, Henry, Dubuque (Clinton, Iowa).....Major, A.U.S.
Entringer, A. J., Dubuque (APO 41, San Francisco, Cal.) .....Capt., A.U.S.
Hall, C. B., Dubuque (San Antonio, Texas).....1st Lt., A.U.S.
Knoll, A. H., Dubuque (San Francisco, Cal.)....Major, A.U.S.
Langford, W. R., Epworth (APO 948, Seattle, Wash.) .....Capt., A.U.S.
Lavery, H. B., Dubuque (Washington, D. C.)....Lt. Col., A.U.S.
Leik, D. W., Dubuque (Douglas, Ariz.).....1st Lt., A.U.S.
Mueller, J. J., Dubuque (Hattiesburg, Miss.)....1st Lt., A.U.S.
Olson, P. F., Dubuque (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.
Painter, R. C., Dubuque (care PM, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Paulus, J. W., Dubuque (Camp Merced, Cal.)....1st Lt., A.U.S.
Plankers. A. G.. Dubuque (APO New York, N. Y.) Major, A.U.S.
Quinn, F. P., Dubuque (Carlisle Barracks, Penn.).Major, A.U.S.
Scharle, Theodore, Dubuque (Fort Lawton, Wash.) Capt., A.U.S.
Schueller, C. J., Dubuque (APO 758, New York, N. Y.) .....1st Lt., A.U.S.
Sharpe, D. C., Dubuque (Fort Leonard Wood, Mo.)..Major, A.U.S.
Smith, C. W., Dubuque (Fleet PO, San Francisco, Cal. .....Lt., U.S.N.R.
Steffens, L. F., Dubuque (Camp Chaffee, Ark.)..Lt. Col., A.U.S.
Straub, J. J., Dubuque (care PM, San Francisco, Cal.) .....Lt., U.S.N.R.
Ward, D. F., Dubuque (Rochester, Minn.)...Lt. Comdr., U.S.N.R.

Emmet County

Clark, J. P., Estherville (Fort Sam Houston, Texas) .....Capt., A.U.S.
Miller. O. H., Estherville (Gowen Field, Idaho) .....Lt. Comdr., U.S.N.R.

Fayette County

Camp, D. E., West Union (Camp Blanding, Fla.)...Capt., A.U.S.
Gallagher, J. P., Oelwein (Camp Elliott, Cal.)....Lt., U.S.N.R.
Henderson, W. B., Oelwein (St. Louis, Mo.).....Major, A.U.S.
Hess, A. M., West Union (Albuquerque, N. Mex.)..1st Lt., A.U.S.
Moen, H. P., West Union (Camp Barkeley, Texas)..Capt., A.U.S
Sulzbach, J. F., Oelwein

Floyd County

Baltzell, W. C., Charles City (Camp McCoy, Wis.)..Capt., A.U.S.
Flater, N. C., Floyd (Rockford, Ill.).....Capt., A.U.S.
Knight, R. A., Rockford (San Diego, Cal.).....Lt., U.S.N.R.
Mackie, D. G., Charles City (Topeka, Kan.)....1st Lt., A.U.S.
Miner, J. B., Jr., Charles City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Tolliver, H. A., Charles City (San Pedro, Cal.)....Capt., A.U.S.

Franklin County

Byers, W. L., Sheffield (Jefferson Barracks, Mo.).1st Lt., A.U.S.
Hedgecock, L. E., Hampton (care PM, San Francisco, Cal.) .....Lt., U.S.N.R.
Randall, W. L., Hampton (San Diego, Cal.).....Lt., U.S.N.R.
Walton, S. G., Hampton (Camp Robinson, Ark.) 1st Lt., A.U.S.

Fremont County

Kerr, W. H., Hamburg (Camp Phillips, Kan.)....Capt., A.U.S.
Marrs, W. D., Tabor (APO 846, New York, N. Y.) .....1st Lt., A U.S.
Wanamaker, A. R., Hamburg (Los Angeles, Cal.)..Capt., A.U.S.

Greene County

Cartwright, F. P., Grand Junction (Casper, Wyo.) Capt., A.U.S.
Castles, W. A., Jr., Rippey (APO San Francisco, Cal.) .....Capt. A.U.S.
Hanson, L. C., Jefferson (Camp Rucker, Ala.)...1st Lt., A.U.S.
Jongewaard, A. J., Jefferson (St. Louis, Mo.).....U.S.N.R.
Limberg, J. I., Jr., Jefferson (APO San Francisco, Cal., ...Capt., A.U.S.
Lohr, P. E., Churdan (San Diego, Cal.).....A.U.S.

Grundy County

Rose, J. E., Grundy Center (Norman, Okla.) Lt. Comdr., U.S.N.R.

Hamilton County

Buxton, O. C., Webster City (March Field, Cal.)..1st Lt., A.U.S.
Howar, B. F., Jewell (APO 514, New York, N. Y.) Major, A.U.S.
James, D. W., Kamrar (APO 700, New York, N. Y.) .....Capt., A.U.S.
Lewis, W. B., Webster City (APO 4500, New York, N. Y.) .....Capt., A.U.S.
Mooney, F. P. Jewell (APO New York, N. Y.)
Paschal, G. A., Williams (Camp Barkeley, Texas)..Capt., A.U.S.
Patterson, R. A., Webster City (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Ptacek, J. L., Webster City (Sheppard Field, Texas)
Thompson, E. D., Webster City (Biloxi, Miss.)..Capt., A.U.S.

Hancock-Winnebago Counties

Dolmage, G. H., Buffalo Center (Nashville, Tenn.)..Capt., A.U.S.
Dulmes, A. H., Klemme (Brigham City, Utah).....Capt., A.U.S.
Eller, L. W., Kanawha (APO 302, New York, N. Y.) .....1st. Lt., A.U.S
Shaw, D. F., Britt (Tucson, Ariz.).....A.U.S.
Thomas, C. W., Forest City (Camp Crowder, Mo.)..Capt., A.U.S.

Hardin County

Houlihan, F. W., Ackley (APO 860, New York, N. Y.) .....1st. Lt., A.U.S.
Jansonius, J. W., Eldora (Fort Rosecrans, Cal.)....Capt., A.U.S.
Johnson, R. J., Iowa Falls (Fort Bliss, Texas)..Capt., A.U.S.
Johnson, W. A., Alden (Pendleton, Ore.)
Shurts, J. J., Eldora (Camp Roberts, Cal.).....1st Lt., A.U.S.
Todd, V. S., Eldora (APO 545, Los Angeles, Cal.)...Capt., A.U.S.

Harrison County

Bergstrom, A. C., Missouri Valley (Ft. Benning, Ga.)....A.U.S.
Burbridge, G. E., Logan (Ft. Benning, Ga.).....Major, A.U.S.
Byrnes, C. W., Dunlap (Jefferson Barracks, Mo.)
Heise, C. A., Jr., Missouri Valley
Tamisiea, F. X., Missouri Valley (Jefferson Barracks, Mo.) .....1st Lt., A.U.S.

Henry County

Brown, W. B., Mount Pleasant (Ft. Devens, Mass.)..Major, A.U.S.
Cogan, Samuel, Mt. Pleasant.....A.U.S.
Dwankowski, Carl, Mt. Pleasant (Carlisle Barracks, Pa.) .....1st. Lt., A.U.S.
Gloeckler, B. B., Mount Pleasant (Laurel, Md.).....Capt., A.U.S.
Hartley, B. D., Mount Pleasant (Yuma, Ariz.)....Capt., A.U.S.
Megorden, W. H., Mount Pleasant (Ogden, Utah) 1st Lt., A.U.S.
Ristine, L. P., Mount Pleasant (Sioux Falls, S. Dak.) .....Major, A.U.S.

Howard County

Buresh, Abner, Lime Springs (San Diego, Cal.)
Nierling, P. A., Cresco (Camp Polk, La.).....Capt., A.U.S.

Humboldt County

Arent, A. S., Humboldt (Stockton, Cal.).....Capt., A.U.S.
Coddington, J. H., Humboldt (Fresno, Cal.).....1st Lt., A.U.S.

Ida County

Dressler, J. B., Ida Grove (Texarkana, Tex.)....1st Lt., A.U.S.
Harris, H. H., Battle Creek (Omaha, Neb.)....1st Lt., A.U.S.
Martin, J. W., Holstein (Montgomery, Ala.).....Capt., A.U.S.

Iowa County

McDaniel, J. D., Marengo (Fort Clark, Texas).....A.U.S.
Miller, D. F., Williamsburg (Seattle, Wash.).....Lt., U.S.N.R.

Jackson County

Swift, F. J., Jr., Maquoketa (Camp Atterbury, Ind.) Major, A.U.S.

Jasper County

Doake, Clarke, Newton.....1st Lt., A.U.S.
Minkel, R. M., Newton (APO New York, N. Y.) 1st Lt., A.U.S.
Ritchey, S. J., Newton.....Major, A.U.S.

Jefferson County

Castell, J. W., Fairfield (Fort Devens, Mass.).....Capt., A.U.S.
Gittler, Ludwig, Fairfield (APO 1001, New York, N. Y.) .....Major, A.U.S.
Graber H. E., Fairfield (Carlisle Barracks, Penn.) Major, A.U.S.
Taylor, I. C., Fairfield (Washington, D. C.)....1st Lt., A.U.S.

Johnson County

Agnew, J. W., Iowa City (Camp Phillips, Kan.)..1st Lt., A.U.S.
Allen, J. H., Iowa City (Scott Field, Ill.).....Capt., A.U.S.
Boiler, W. F., Iowa City (Fort Leonard Wood, Mo.) .....Major, A.U.S.
Boyd, E. J., Iowa City (Colorado Springs, Colo.).1st Lt., A.U.S.
Brinkhous, K. M., Iowa City (Fort Houston, Texas) Lt. Col., A.U.S.
Callahan, G. D., Iowa City (El Toro, Cal.).....Lt., U.S.N.R.
Cooper, W. K., Iowa City (Jefferson Barracks, Mo.) Capt., A.U.S.
Crowell, E. A., Iowa City (Spokane, Wash.)..1st Lt., A.U.S.
Diddle, A. W., Iowa City (Key West, Fla.)..Lt. (jg), U.S.N.R.
Dorner, R. A., Iowa City (APO 534, New York, N. Y.) .....Capt., A.U.S.
Elmquist, H. S., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Emmons, M. B., Iowa City (Fort Sam Houston, Texas) .....1st Lt., A.U.S.
Flynn, J. E., Iowa City (Hot Springs, Ark.).....A.U.S.

Fourt, A. S., Iowa City (APO 1001, New York, N. Y.) .....Col., A.U.S.
Francis, N. L., Iowa City (Annapolis, Md.) Lt. (jg), U.S.N.R.
Galinsky, L. J., Oakdale (Camp Crowder, Mo.).....Capt., A.U.S.
Garlinghouse, R. O., Iowa City (Fort Snelling, Minn.)..A.U.S.
Hardin, R. C., Iowa City (APO 1001, New York, N. Y.)....A.U.S.
Hartung, Walter, Iowa City (Fort Des Moines, Iowa)..A.U.S.
Hessin, A. L., Iowa City.....1st Lt., A.U.S.
Irwin, R. L., Iowa City (Iowa City, Iowa)..Lt. Comdr., U.S.N.R.
January, L. E., Iowa City (Davis-Monthan Field, Ariz.) .....1st Lt., A.U.S.
Keislar, H. D., Iowa City (Camp Barkeley, Tex.)..1st Lt., A.U.S.
Lage, R. H., Iowa City (Santa Barbara, Cal.).....Lt., U.S.N.R.
Longwell, F. H., Iowa City (APO 505, New York, N. Y.) .....Capt., A.U.S.
Nagyfy, S. F., Iowa City (Memphis, Tenn.)...Lt. (jg), U.S.N.R.
Newman. R. W., Iowa City (Fleet PO, New York, N. Y.) .....Lt., U.S.N.R.
Parkin, G. L., Iowa City (Carlisle Barracks, Pa.)..1st Lt., A.U.S.
Paulus, E. W., Iowa City (APO 1001, New York, N. Y.) .....Lt. Col., A.U.S.
Petersen, V. W., Iowa City (APO 1001, New York, N. Y.) .....Col., A.U.S.
Sells, R. L., Jr., Iowa City (Hamilton Field, Cal.).1st Lt., A.U.S.
Smith, H. F., Iowa City (Great Lakes, Ill.).Lt. Comdr., U.S.N.R.
Springer, E. W., Iowa City (APO 622, Miami, Fla.).1st Lt., A.U.S.
Stadler, H. E., Iowa City (Washington, D. C.)....1st Lt., A.U.S.
Staggs, W. A., Iowa City (Camp Robinson, Ark.)..1st Lt., A.U.S.
Stephens. R. L., Iowa City (Orlando, Fla.).....Capt., A.U.S.
Stump, R. B., Iowa City (Fort Leonard Wood, Mo.)..A.U.S.
Titus, E. L., Iowa City (Fort Wright, N. Y.)....Col., A.U.S.
Vest, W. M., Iowa City (APO 3671, San Francisco, Cal.) .....Capt., A.U.S.
Ziffren, S. E., Iowa City (Springfield, Mo.)....1st. Lt., A.U.S.

Junior Members

Adams, M. P., Iowa City
Ahrens, J. H., Iowa City (APO San Francisco, Cal.).....A.U.S.
Ball, A. L., Iowa City (Camp Polk, La.).....Major, A.U.S.
Barrent, M. E., Iowa City (Camp Tyson, Tenn.)..Capt., A.U.S.
Black, N. M., Iowa City (McChord Field, Wash.) 1st Lt., A.U.S.
Blair, J. D., Iowa City (APO San Francisco, Cal.).Major, A.U.S.
Boyd, R. J., Iowa City (Spokane, Wash.).....Capt., A.U.S.
Brintnall, E. S., Iowa City (Colorado Springs, Colo.) .....1st Lt., A.U.S.
Burr, S. P., Iowa City (APO San Francisco, Cal.).1st Lt., A.U.S.
Connole J. F., Iowa City (Camp Bowie, Texas)..1st Lt., A.U.S.
Couch, O. A., Iowa City (Camp Van Dorn, Miss.)..1st Lt., A.U.S.
Decker, C. E., Iowa City (Oklahoma City, Okla.)..1st Lt., A.U.S.
Donnelly B. A., Iowa City (APO San Francisco, Cal.) .....1st Lt., A.U.S.
Ehrenhaft, J. L., Iowa City (March Field, Cal.)..1st Lt., A.U.S.
Englerth, F. L., Iowa City (APO San Francisco, Cal.) .....Capt., A.U.S.
Freiberg, M., Iowa City (Jefferson Barracks, Mo.).....A.U.S.
Glassman A. L., Iowa City (Palm Springs, Cal.) 1st Lt., A.U.S.
Gilliland, C. H., Iowa City (Great Lakes, Ill.) Lt. (jg), U.S.N.R.
Hamilton, H. E., Iowa City (Chicago, Ill.).....1st Lt., A.U.S.
Harms, G. E., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Ide, L. W., Iowa City (Fort Warren, Wyo.).....1st Lt., A.U.S.
Jacobs, C. A., Iowa City (APO New York, N. Y.).Major, A.U.S.
Keil, P. G., Iowa City (Sioux City, Iowa).....1st Lt., A.U.S.
Kelberg, M. R., Iowa City (Treasure Island, Cal.) .....Lt. (jg), U.S.N.R
Keleher, M. F., Iowa City (Great Lakes, Ill.)..Lt. (jg), U.S.N.R.
Keohen, G. F., Iowa City (Camp Grant, Ill.)....Capt., A.U.S.
Kugler, F. E., Iowa City (Fort Warren, Wyo.)....Capt., A.U.S.
Lowry, F. C., Iowa City (Sioux Falls, S. D.)....1st Lt., A.U.S.
McCann, J. P., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
McQuiston, W. O., Iowa City (Chicago, Ill.)....1st Lt., A.U.S.
Moen, B. H., Iowa City
Moon, R. E., Iowa City (Camp Bowie, Texas)....1st Lt., A.U.S.
Phillips, R. M., Iowa City (San Francisco, Cal.) 1st Lt., A.U.S.
Pulliam, R. L., Iowa City (Portland, Ore.).....Major, A.U.S.
Randall, C. G., Iowa City
Randall, R. G., Iowa City (Waterloo, Iowa).....Capt. A.U.S.
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.) .....1st Lt., A.U.S.
Russin, L. A., Iowa City (Fort Blanding, Fla.)....Capt., A.U.S.
Saar, J. L., Iowa City (APO New York, N. Y.)..Capt., A.U.S.
Sawtelle, W. W., Iowa City
Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Shand, J. A., Iowa City (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Shapiro, S. I., Iowa City
Simpson, F. E., Iowa City (Camp Grant, Ill.).....A.U.S.
Skewis, J. E., Iowa City (Rochester, N. Y.)..Lt. (jg), U.S.N.R.
Skouge, O. T., Iowa City
Towle, R. A., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Warren, R. F., Iowa City (Santa Barbara, Cal.).....A.U.S.
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.) .....1st. Lt., A.U.S.
Wicks, W. J., Iowa City (Camp Crowder, Mo.)....Capt., A.U.S.
Williams, L. A., Iowa City (Treasure Island, Cal.).1st Lt., A.U.S.
Willumsen, H. C., Iowa City (Chico, Cal.).....Capt., A.U.S.
Wolkin, J., Iowa City (San Antonio, Texas)....Capt., A.U.S.
Yetter, W. L., Iowa City (APO New York, N. Y.) Capt., A.U.S.
Zahrt, N. E., Iowa City (Miami Beach, Fla.)....1st Lt., A.U.S.
Zimmerman, H. A., Iowa City (Santa Ana, Cal.)..1st Lt., A.U.S.

Keokuk County

Bjork, Floyd, Keota (Camp Barkeley, Texas).....A.U.S.
Doyle, J. L., Sigourney (Camp Barkeley, Texas).....A.U.S.
Engelmann, A. T., What Cheer (Camp Polk, La.) Capt., A.U.S.
Graham, J. A., Gibson (Needles, Cal.).....1st. Lt., A.U.S.
Montgomery, G. E., Keota (Fort Sam Houston, Texas)....A.U.S.
Wiley, Dudley, Hedrick (Mason City, Wash.)

Kossuth County

Clapsaddle, D. W., Burt (Swannanoa, N. C.).....1st Lt., A.U.S.
Williams, R. L., Lakota (San Diego, Cal.)..Lt. Comdr., U.S.N.R.

Lee County

Ashline, G. H., Keokuk (Indiantown Gap, Pa.)....Capt., A.U.S.
Cleary, H. G., Fort Madison (APO 726, Seattle, Wash.)..... .....Capt., A.U.S.
Cooper. R. E., Keokuk (Fort Leonard Wood, Mo.)
Johnstone, A. A., Keokuk (Camp Robinson, Ark.)....Col., A.U.S.
McKee, T. L., Keokuk (APO 922, San Francisco, Cal.) .....Major, A.U.S.
Pumphrey, L. C., Keokuk (Ft. Leonard Wood, Mo.) .....Major, A.U.S.
Rankin, J. R., Keokuk (Great Lakes, Ill.).....Lt., U.S.N.R.
Steffey, F. L., Keokuk (Fort Snelling, Minn.)
Van Werden, B. D., Keokuk (Fort Jackson, S. C.)..Capt., A.U.S.

Linn County

Andre, G. R., Lisbon (Camp Barkeley, Texas)....Major, A.U.S.
Berney, P. W., Cedar Rapids (San Francisco, Cal.) Capt., A.U.S.
Block, W. M., Cedar Rapids (Ft. Lewis, Wash.)....1st. Lt., A.U.S.
Chapman, R. M., Cedar Rapids (Chicago, Ill.).....Capt., A.U.S.
Coughlan, V. H., Coggon (Fort Snelling, Minn.)
Courter, W. O., Springville (Fort Warren, Wyo.)....Capt., A.U.S.
Crew, P. I., Marion (Northfield, Vt.).....Capt., A.U.S.
Dunn, F. C., Cedar Rapids (Chicago, Ill.).....Capt., A.U.S.
Halpin, L. J., Cedar Rapids (Atlanta, Ga.)....Major, A.U.S.
Hecker J. T., Cedar Rapids (Pecos, Texas).....1st Lt., A.U.S.
Jirsa, H. O., Cedar Rapids (APO 871, New York, N. Y.) .....Major, A.U.S.
Keith, J. J., Marion (APO 502, San Francisco, Cal.) .....Major, A.U.S.
Kieck, E. G., Cedar Rapids (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.
Kruckenberg, W. G., Mount Vernon (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Locher, R. C., Cedar Rapids (Merced, Cal.).....Major, A.U.S.
MacDougal, R. F., Cedar Rapids (Carlisle Barracks, Pa.) .....Capt., A.U.S.
McConkie, E. B., Cedar Rapids (Sioux Falls, S. Dak.).....Major, A.U.S.
McQuiston, J. S., Cedar Rapids (Salina, Kan.)..Major, A.U.S.
Meffert, C. B., Cedar Rapids (Carlisle Barracks, Pa.) .....Major, A.U.S.
Netolicky, R. Y., Cedar Rapids (San Francisco, Cal.).Lt., U.S.N.R.
Noble, W. C., Cedar Rapids (Camp San Luis Obispo, Cal.) .....1st. Lt., A.U.S.
Noe, C. A., Cedar Rapids (Hot Springs, Ark.)..Major, A.U.S.
Parke, John, Cedar Rapids (APO 34, New York, N. Y.) .....Capt.. A.U.S.
Proctor, R. D., Cedar Rapids (Corpus Christi, Texas) .....Lt. Comdr., U.S.N.R.
Redmond, J. J., Cedar Rapids (APO 813, New York, N. Y.) .....Major, A.U.S.
Rieniets, J. H., Cedar Rapids (Fleet PO, San Francisco, Cal.) .....Lt. Comdr, U.S.N.R.
Sedlacek, L. B., Cedar Rapids (Camp Shelby, Miss.) .....Lt. Col., A.U.S.
Smrha, J. A., Cedar Rapids (Camp Davis, N. C.)..1st Lt., A.U.S
Stark, C. H., Cedar Rapids (Denver, Colo.).....Capt., A.U.S.
Sulek, A. E., Cedar Rapids (APO 960, San Francisco, Cal.) .....Major, A.U.S
Woodhouse, K. W., Cedar Rapids (APO 34, New York, N. Y.) .....Lt. Col., A.U.S.
Wray, R. M., Cedar Rapids (APO 958, San Francisco, Cal.) .....Major, A.U.S.
Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R

Louisa County

DeYarman, K. T., Morning Sun (San Antonio, Texas) .....1st Lt., A.U.S
Tandy, R. W., Morning Sun (Norfolk, Va.)..Lt. Comdr., U.S.N.R.

Lucas County

Lister, K. E., Chariton (Fort Snelling, Minn.)

Lyon County

Cook, S. H., Rock Rapids (Memphis, Tenn.).....Capt., A.U.S
‡Corcoran, T. E., Rock Rapids (APO New York) N. Y.) .....Capt. A.U.S.
Moriarty, J. F., Rock Rapids (APO 700, New York, N. Y.) .....Capt. A.U.S.

Madison County

Boden, H. N., Truro (Fresno, Cal.)
Chesnut, P. F., Winterset (Portland, Ore.).....1st Lt., A.U.S.
Wicks, R. L., Winterset (Portland, Ore.)
Veltman, J. F., Winterset (APO 8883, San Francisco, Cal.) .....Capt., A.U.S.

Mahaska County

Bennett, G. W., Oskaloosa (Fort Riley, Kan.)..Major, A.U.S.
Clark, G. H., Oskaloosa.....Lt. Comdr., U.S.N.R.
Greenlee, M. R., Oskaloosa (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Lemon, K.M., Oskaloosa.....1st Lt., A.U.S.
Zager, L. L., Oskaloosa (Camp Rucker, Ala.)....1st. Lt., A.U.S.

Marion County

Elliott, V. J., Knoxville (Portland, Ore.).....Capt., A.U.S.
Mater, D. A., Knoxville (Lincoln, Neb.).....Capt., A.U.S.
Ralston, F. P., Knoxville (Indio, Cal.).....Capt., A.U.S.
Schiek, C. M., Knoxville.....Lt. Comdr., U.S.N.R.
Schroeder, M. C., Pella (Camp Uhlan, Texas)....1st Lt., A.U.S.
Williams, D. B., Knoxville.....Capt. A.U.S.

Marshall County

Carpenter, R. C., Marshalltown (APO New York, N. Y.).....Capt., A.U.S.
Marble, E. J., Marshalltown (San Diego, Cal.)....Lt., U.S.N.R.
Marble, W. P., Marshalltown (Walla Walla, Wash.) Capt., A.U.S.
Meyer, M. G., Marshalltown (Camp Claiborne, La.)..Capt., A.U.S.
Noonan, J. J., Marshalltown (San Diego, Cal.)..Major, A.U.S.
Phelps, R. E., State Center (Fort Ord, Cal.).....Capt., A.U.S.
Sinning, J. E., Melbourne (Camp Robinson, Ark.)..Capt., A.U.S.
Smith, E. M., State Center (Sioux City, Ia.).....Lt. Col., A.U.S.
Stegman, J. J., Marshalltown (Portland, Ore.)..Capt., A.U.S.
Wells, R. C., Marshalltown (Gowen Field, Idaho) 1st Lt., A.U.S.
Wolfe, O. D., Marshalltown (Fort Riley, Kan.)..Capt., A.U.S.
Wolfe, R. M., Marshalltown (Cherry Point, N. C.).....Lt., U.S.N.R.

Mills County

DeYoung, W. A., Glenwood (APO 513, New York, N. Y.).....Capt., A.U.S.
Magaret, E. C., Glenwood (Lubbock, Texas)....1st Lt., A.U.S.
Shonka, T. E., Malvern (Camp Pickett, Va.).....Capt., A.U.S.

Mitchell County

Culbertson, R. A., St. Ansgar (Fort Knox, Ky.)...Lt. Col., A.U.S.
Moore, E. E., Osage (Camp Pickett, Virginia).....Major, A.U.S.
Owen, William, Osage (San Diego, Cal.).....Lt. (jg), U.S.N.R.
Walker, T. G., Riceville (Minneapolis, Minn.).....Lt., U.S.N.R.

Monona County

Almer, L. E., Moorhead (Fort Knox, Ky.).....A.U.S.
Ganzhorn, H. L., Mapleton (Carlisle Barracks, Pa.).....1st. Lt., A.U.S.
Gaukel, L. A., Onawa (APO 937, Seattle, Wash.)..1st Lt., A.U.S.
†Harlan, M. E., Onawa (care PM, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Stauch, M. O., Whiting (Fort Rosecrans, Cal.).....A.U.S.
Wainwright, M. T., Mapleton (APO 939, Seattle, Wash.)..A.U.S.
Wolpert, P. L., Onawa (Rochester, Minn.).....1st Lt., A.U.S.

Monroe County

Heimann, V. R., Albia (Camp Maxey, Texas).....Capt., A.U.S.
Richter, H. J., Albia (Waco, Texas).....Capt., A.U.S.
Smith, R. A., Albia (San Antonio, Texas).....1st Lt., A.U.S.

Montgomery County

Bastron, H. C., Red Oak (APO 525, New York, N. Y.).....Major, A.U.S.
Hansen, F. A., Red Oak (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.
Moriarty, L. R., Villisca (APO 944, Seattle, Wash.).Capt., A.U.S.
Sorensen, E. M., Red Oak (Jefferson Barracks, Mo.).....1st Lt., A.U.S.

Muscatine County

Ady, A. E., West Liberty (care PM, San Francisco, Cal.)U.S.N.R.
Asthalter, R. W., Muscatine (Fort Meade, Md.)..1st Lt., A.U.S.
Carlson, E. H., Muscatine (Kalamazoo, Mich.)....Capt., A.U.S.
Goad, R. R., Muscatine (Washington, D. C.) Lt. Comdr., U.S.N.R.
Kimball, J. E., Jr., West Liberty (APO Miami, Fla.)
Lindley, E. L., Muscatine (APO Los Angeles, Cal.).Capt., A.U.S.
Muhs, E. O., Muscatine (Camp Claiborne, La.).....Capt., A.U.S.
Norem, Walter, Muscatine (APO Miami, Fla.)....Capt., A.U.S.
Robertson, T. A., West Liberty (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Sywassink, G. A., Muscatine (Camp Campbell, Ky.)Major, A.U.S.
Whitmer, L. H., Wilton Junction (Fort Sill, Okla.).Major, A.U.S.

O'Brien County

Getty, E. B., Primghar (Camp Robinson, Ark.)..1st Lt., A.U.S.
Hayne, W. W., Paullina (APO New York, N. Y.)..1st Lt., A.U.S.
Moen, S. T., Hartley (APO 3492, New York, N. Y.).Major, A.U.S.
Myers, K. W., Sheldon (Watertown, S. Dak.)..1st Lt., A.U.S.

Osceola County

Kuntz, G. S., Sibley (APO 34, New York, N. Y.)

Page County

Barnes, C. A., Shenandoah (Fort Bragg, N. C.)....Capt., A.U.S.
Blackman, Nathan, Shenandoah.....Capt., A.U.S.
Bossingham, E. N., Clarinda (APO 923, San Francisco, Cal.).....Capt., A.U.S.
Bunch, H. Mck., Shenandoah (Farragut, Idaho).....Lt. Comdr., U.S.N.R.
‡Burdick, F. D., Shenandoah (APO, New York, N. Y.).....Capt., A.U.S.
Burnett, F. K., Clarinda (Camp Carson, Colo.)....Major, A.U.S.
Little, E. B., Shenandoah.....1st Lt., A.U.S.
Rausch, G. R., Clarinda (Wendover Field, Utah) 1st Lt., A.U.S.
Savage, L. W., Shenandoah (Fort Meade, Md.)..1st Lt., A.U.S.

Palo Alto County

Davey, W. P., Emmetsburg (San Diego, Cal.) Lt. (jg), U.S.N.R.

Plymouth County

Bowers, C. V., LeMars (Carlisle Barrack, Pa.)...1st Lt., A.U.S.
Foss. R. H., Remsen (Salt Lake City, Utah)..1st Lt., A.U.S.
Wolfson, Harold, Kingsley (Fort Lewis, Wash.)....Capt., A.U.S.

Pocahontas County

Blair, F. L., Jr., Fonda.....1st Lt., A.U.S.
Herrick, T. G., Gilmore City (Los Angeles, Cal.)...Capt., A.U.S.
Larson, J. B., Laurens (Camp Chaffee, Ark.).....Capt., A.U.S.
Leserman, L. K., Rolfe (Camp Polk, La.).....1st Lt., A.U.S.

Polk County

Abbott, W. D., Des Moines (Oakland, Cal.)..Lt. Comdr., U.S.N.R.
Anderson, N. B., Des Moines (APO 668, New York, N. Y.).....Lt. Col., A.U.S.
Angell, C. A., Des Moines (Camp Maxey, Texas)....Capt., A.U.S.
Anspach, R. S., Mitchellville (APO 528, New York, N. Y.).....Lt. Col., A.U.S.
Barner, J. L., Des Moines (Atlanta, Ga.)....Major, A.U.S.
Barnes, B. C., Des Moines (Ogden, Utah).....Capt., A.U.S.
Bates, M. T., Des Moines (Fleet PO, New York, N. Y.).....Lt. Comdr., U.S.N.R.
Bender, H. R., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Bond, T. A., Des Moines (Rochester, Minn.)....Lt. (jg), U.S.N.R.
Bone, H. C., Des Moines (Arlington, Cal.).....Capt., A.U.S.
Brown, A. W., Des Moines (Fort Leavenworth, Kan.).....Capt., A.U.S.
Bruner, J. M., Des Moines (Fort Bliss, Texas)....Major, A.U.S.
Bruns, P. D., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
‡Burgeson, F. M., Des Moines (Am. P.O.W. 4372, Oflag, 9 A/Z, Germany.....Capt., A.U.S.
Caldwell, J. W., Des Moines (Vulcan, Alberta, Canada).....Flight Lt., R.C.A.F.
Chambers, J. W., Des Moines (Fort Riley, Kan.)..1st Lt., A.U.S.
Chase, W. B., Jr., Des Moines (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.
Clark, G. E., Jr., Des Moines (Randolph Field, Texas).....1st Lt., A.U.S.
Connell, J. R., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Corn, H. H., Des Moines (St. Louis, Mo.).....1st Lt., A.U.S.
Coughlan, D. W., Des Moines (Camp Gruber, Okla.) Capt., A.U.S.
Crowley, D. F., Jr., Des Moines (APO New York, N. Y.).....Capt., A.U.S.
Crowley, F. A., Des Moines (APO New York, N. Y.).....1st Lt., A.U.S.
DeCicco, Ralph, Des Moines (APO Los Angeles, Cal.).....Capt., A.U.S.
Decker, H. G., Des Moines (Long Beach, Cal.)....Lt., U.S.N.R.
Downing, A. H., Des Moines (Fort Snelling, Minn.).....1st Lt., A.U.S.
Dushkin, M. A., Des Moines (Fort Huachuca, Ariz.).....Capt., A.U.S.
Elliott, O. A., Des Moines (Pecos, Texas).....1st Lt., A.U.S.
Ellis, H. G., Des Moines (Kearney, Nebr.).....Capt., A.U.S.
Ervin, L. J., Des Moines (Lubbock, Texas).....Major, A.U.S.
Fried, David, Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Fracasse, John, Des Moines.....1st Lt., A.U.S.
George, E. M., Des Moines (Camp Dodge, Iowa).....Lt. Comdr., U.S.N.R.
Gerchek, E. W., Des Moines
Gibson, D. N., Des Moines (Carlisle Barracks, Pa.).Major, A.U.S.
Goldberg, Louie, Des Moines (Gulfport, Miss.).....1st Lt., A.U.S.
Gordon, A. M., Des Moines (Fort Ord, Cal.)....Capt., A.U.S.
Graeber, F. O., Des Moines (Aberdeen, S. Dak.)..1st Lt., A.U.S.
Greek, L. M., Des Moines (Camp Crowder, Mo.)..1st Lt., A.U.S.
Gurau, H. H., Des Moines (Santa Ana, Cal.).....1st Lt., A.U.S.
Haines, D. J., Des Moines (Denver, Colo.).....Capt., A.U.S.
Harris, D. D., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Harris, H. L., Des Moines.....1st Lt., A.U.S.
Hess, John, Jr., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
James, A. D., Des Moines (Fleet PO, San Francisco, Cal.).....Comdr., U.S.N.R.
Johnston, C. H., Des Moines (APO 639, New York, N. Y.).....Lt. Col., A.U.S.
Kast, D. H., Des Moines (Fort Stevens, Ore.).....Capt., A.U.S.
Kelley, E. J., Des Moines (Kansas City, Mo.).....Lt. Comdr., U.S.N.R.
Kelly, D. H., Des Moines (Denver, Colo.).....Lt. Col., A.U.S.
Klocksiem, H. L., Des Moines.....Lt. (jg), U.S.N.R.
Kottke, E. E., Des Moines (Temple, Texas).....Capt., A.U.S.
Landis, S. N., Des Moines (West Palm Beach, Fla.).....1st Lt., A.U.S.
La Tona, Salvatore, Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Lederman, James, Des Moines.....1st Lt., R.C.A.
Lehman, E. W., Des Moines (Memphis, Tenn.)....Major, A.U.S.
Lovejoy, E. P., Des Moines (Mare Island, Cal.).....Lt. Comdr., U.S.N.R.
Maloney, P. J., Des Moines (Fort Lewis, Wash.)...1st Lt., A.U.S.
Marquis, G. S., Des Moines (Chicago, Ill.)..Lt. Comdr., U.S.N.R.
Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.
Mauritz, E. L., Des Moines (APO 700, New York, N. Y.).....1st Lt., A.U.S.
McCoy, H. J., Des Moines (Iowa City, Iowa)...Comdr., U.S.N.R.
McDonald, D. J., Des Moines (March Field, Cal.).Capt., A.U.S.
McNamee, J. H., Des Moines (Oakland, Cal.).....Lt. Comdr., U.S.N.R.
Mencher, E. W., Des Moines.....1st Lt., A.U.S.
Merkel, B. M., Des Moines (Colorado Springs, Colo.).....Major., A.U.S.
Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.).....Capt., A.U.S.

Morden, R. P., Des Moines (APO 4570, New York, N. Y.) ..... 1st Lt., A.U.S.
Murphy, J. H., Des Moines (San Diego, Cal.) ..... Lt., U.S.N.R.
Nelson, A. L., Des Moines (Camp Livingston, La.) Capt., A.U.S.
Noun, L. J., Des Moines (Fleet PO, New York, N. Y.) ..... Lt. (jg), U.S.N.R.
Noun, M. H., Des Moines (APO 871, New York, N. Y.) ..... Major, A.U.S.
Nourse, M. H., Des Moines (Bethesda, Md.) .. Lt. (jg), U.S.N.R.
Patton, B. W., Des Moines (Camp Robinson, Ark.) ..... 1st Lt., A.U.S.
Pearlman, L. R., Des Moines (APO 980, Seattle, Wash.) ..... Major, A.U.S.
Peisen, C. J., Des Moines (Camp Perry, Ohio) .. 1st Lt., A.U.S.
Penn, E. C., West Des Moines (Spokane, Wash.) ..... 1st Lt., A.U.S.
Pfeiffer, E. P., Des Moines (Springfield, Mo.) .... Capt., A.U.S.
Phillips, A. B., Des Moines (Corpus Christi, Texas) ..... Lt., U.S.N.R.
Porter, R. J., Des Moines (Sioux City, Iowa) ..... 1st Lt., A.U.S.
Powell, L. D., Des Moines (Long Beach, Cal.) ... Comdr., U.S.N.R.
Pratt, E. B., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Priestley, J. B., Des Moines (Camp Phillips, Kan.) .. Major, A.U.S.
Purdy, W. O., Des Moines (Camp Howze, Texas) .. Capt., A.U.S.
Riegelman, R. H., Des Moines (APO 634, New York, N. Y.) ..... Major, A.U.S.
Robinson, V. C., Des Moines (Tampa, Fla.) .... Capt., A.U.S.
Rotkow, M. J., Des Moines (Louisville, Ky.) .... 1st Lt., A.U.S.
Schaeferle, M. J., Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Schlaser, V. L., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Shepherd, L. K., Des Moines (APO New York, N. Y.) ..... 1st Lt., A.U.S.
Shifler, H. K., Des Moines (APO New York, N. Y.) . Capt., A.U.S.
Singer, P. L., Des Moines (Camp Grant, Ill.) .. 1st Lt., A.U.S.
Skultety, J. A., Des Moines (Brownsville, Texas) ..... 1st. Lt., U.S.P.H.S.
Smead, H. H., Des Moines (Nashville, Tenn.) ..... Capt., A.U.S.
Smith, H. J., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Smith, R. T., Des Moines (Meridian, Miss.) .... 1st Lt., A.U.S.
Snodgrass, R. W., Des Moines (Fort Rosecrans, Cal.) ..... Capt., A.U.S.
Snyder, G. E., Grimes (Spadra, Cal.) ..... Major, A.U.S.
Sohm, H. A., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Sorensen, R. M., Des Moines (Topeka, Kan.) . Major, U.S.P.H.S.
Springer, F. A., Des Moines (Treasure Island, Cal.) ..... Lt. Comdr., U.S.N.R.
Stearns, A. B., Des Moines (Denver, Colo.) .. Major, A.U.S.
Stickler, Robert, Des Moines (Fort Benning, Ga.) 1st. Lt., A.U.S.
Stitt. P. L., Des Moines (Seattle, Wash.) .... Lt. (jg), U.S.N.R.
Throckmorton, J. F., Des Moines (Camp Howze, Texas) ..... Capt. A.U.S.
Toubes, A. A., Des Moines (Leland, Miss.) ..... 1st Lt., A.U.S.
Turner, H. V., Des Moines (Tyler, Texas) ..... 1st Lt., A.U.S.
Updegraff, Thomas, Des Moines (Spokane, Wash.) . 1st Lt., A.U.S.
Van Hale, L. A., Des Moines (Transfer, Penn.) .... 1st Lt., A.U.S.
Vaubel, E. K., Des Moines (Portland, Ore.) ..... Capt., A.U.S.
Wagner, E. C., Des Moines (Washington, D. C.) .. 1st Lt., A.U.S.
Willett, W. M., Des Moines (Fort Bragg, N. C.) .. 1st Lt., A.U.S.
Wirtz, D. C., Des Moines (Great Lakes, Ill.) .. Lt. Comdr., U.S.N.R.
Zarchy, A. C., Des Moines (Camp Cook, Cal.) ..... Capt., A.U.S.

Pottawattamie County

‡Beaumont, F. H., Council Bluffs (APO 34, New York, N. Y.) ..... Major, A.U.S.
Cogley, J. P., Council Bluffs (Fort Ord, Cal.) .... Major., A.U.S.
Collins, R. M., Council Bluffs (San Diego, Cal.) .... Lt., U.S.N.R.
Dean, A. M., Council Bluffs (Pensacola, Fla.) ..... Lt. Comdr., U.S.N.R.
Edwards, C. V., Council Bluffs (Olathe, Kan.) ..... Lt. Comdr., U.S.N.R.
Hennessy, J. D., Council Bluffs (Chicago, Ill.) .. Lt., U.S.N.R.
Jensen, A. L., Council Bluffs (APO 952, San Francisco, Cal.) ..... Lt. Col., A.U.S.
Klok, G. J., Council Bluffs (Fleet PO, San Diego, Cal.) ..... Lt., U.S.N.R.
Kurth, C. J., Council Bluffs (Camp Crowder, Mo.) . 1st Lt., A.U.S.
Limbert, E. M., Council Bluffs (Camp Crowder, Mo.) ..... Capt., A.U.S.
Maiden, S. D., Council Bluffs (San Francisco Cal.) ..... Major. A.U.S.
Martin, L. R., Council Bluffs (Camp Rucker, Ala) .. Capt., A.U.S.
Moskovitz, J. M., Council Bluffs (Camp Lockett Cal.) ..... Capt., A.U.S.
Sternbill, Isaac, Council Bluffs (APO 3552, Seattle, Wash.) ..... Capt., A.U.S.
Tinley, R. E., Council Bluffs (APO New York, N. Y.) ..... Capt., A.U.S.
Treynor, J. V., Council Bluffs (South Bend, Ind.) ..... Lt. Comdr., U.S.N.R.
Wieseler, R. J., Avoca (McChord Field, Wash.) ..... A.U.S.
Wurl, O. A., Council Bluffs (APO 871, New York, N. Y.) ..... Capt., A.U.S.

Poweshiek County

Brobyn, T. E., Grinnell (Fort Ord, Cal.) ..... Capt., A.U.S.
Hickerson, L. C., Brooklyn (Oxnard, Cal.) ..... 1st. Lt., A.U.S.
Korfmacher, E. S., Grinnell (San Francisco, Cal.) ..... Capt., A.U.S.
Niemann, T. V., Brooklyn (Camp Shelby, Miss.) ..... 1st Lt., A.U.S.
Parish, J. R., Grinnell (Treasure Island, Cal.) ..... Lt. Comdr., U.S.N.R.

Ringgold County

Seaman, C. L., Mount Ayr (Van Buren, Ark.) .. Capt., A.U.S.

Sac County

Bassett, G. H., Sac City (San Diego, Cal.) .. Lt. Comdr., U.S.N.R.
Deters, D. C., Schaller (APO 1001, New York, N. Y.) ..... Capt., A.U.S.
Evans, W. I., Sac City (Camp Hood, Texas) ..... Capt., A.U.S.
Klocksiem, R. G., Odebolt (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Neu, H. N., Sac City (Portland, Ore.) ..... Major, A.U.S.

Scott County

Baker, R. W., Davenport (Rock Island, Ill.) .. 1st Lt., A.U.S.
Balzer, W. J., Davenport (APO Seattle, Wash.) .. 1st Lt., A.U.S.
Bishop, J. F., Davenport (APO 972, Seattle, Wash.) ..... 1st Lt., A.U.S.
Block, L. A., Davenport (APO 534, New York, N. Y.) ..... Major, A.U.S.
Boden, W. C., Davenport (APO 3760, New York, N. Y.) ..... Capt., A.U.S.
Boyer, U. S., Davenport (Rock Island, Ill.) ..... Lt. Col., A.U.S.
Brown, D. H., Davenport (Waycross, Ga.) ..... Capt., A.U.S.
Brown, M. J., Davenport (Camp Hale, Colo.) ..... Capt., A.U.S.
Carey, E. T., Davenport (Fort Andrews, Mass.) .. 1st Lt., A.U.S.
Christiansen, C. C., Dixon (APO 1104, San Francisco, Cal.) ..... 1st Lt., A.U.S.
Cummins, G. M., Jr., Davenport ..... 1st Lt., A.U.S.
Decker, C. E., Davenport (Oklahoma City, Okla.) ..... 1st Lt., A.U.S.
Evans, H. J., Davenport (Colorado Springs, Colo.) . Capt., A.U.S.
Gibson, P. E., Davenport (Palm Springs, Cal.) ..... Capt., A.U.S.
Hurevitz, H. M., Davenport (APO New York, N. Y.) . Capt., A.U.S.
Hurteau, Everett, Davenport (APO 534, New York, N. Y.) ..... Capt., A.U.S.
Hurteau, W. W., Davenport (Camp Barkeley, Texas) ..... Major, A.U.S.
Kimberly, L. W., Davenport (New Orleans, La.) . Capt., A.U.S.
Krakauer, Max, Davenport (Fort Hayes, Ohio) .... 1st Lt., A.U.S.
LaDage, L. H., Davenport (Camp Campbell, Ky.) .. Capt., A.U.S.
Lorfeld, G. W., Davenport (Waynesburg, Pa.) ..... Capt., A.U.S.
Marker, J. I., Davenport (Camp Carson, Colo.) .. Col., A.U.S.
McMeans, T. W., Davenport (APO New York, N. Y.) ..... 1st Lt., A.U.S.
Neufeld, R. J., Davenport (Rock Island, Ill.) ..... Capt., A.U.S.
Sheeler, I. H., Davenport (Omaha, Neb.) ..... 1st Lt., A.U.S.
Smazal. S. F., Davenport (Pando, Colo.) ..... 1st Lt., A.U.S.
Sorenson, A. C., Davenport (Oakland, Cal.) .. Lt. Comdr., U.S.N.R.
Sunderbruch, J. H., Davenport (Paris, Texas) .... 1st Lt., A.U.S.
Weinberg, H. B., Davenport (Fort Benning, Ga.) .. Major, A.U.S.
Zukerman, C. M., Bettendorf (Cincinnati, Ohio) .... Capt., A.U.S.

Shelby County

Bisgard, C. V., Harlan (Farragut Air Base, Idaho) ..... Lt. Comdr., U.S.N.R.
Griffith, W. O., Shelby (Camp Davis, N. C.) ..... A.U.S.
McGowan, J. P., Harlan (San Diego, Cal.) .. Lt. Comdr., U.S.N.R.

Sioux County

Gleysteen, R. R., Alton (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Grossmann, E. B., Orange City (Fort Sam Houston, Texas) ..... 1st Lt., A.U.S.
Larsen, M. O., Hawarden (Camp Bowie, Texas) .. Major, A.U.S.
Oelrich, A. M., Hull (Carlisle Barracks, Pa.) .... 1st. Lt., A.U.S.
Oelrich, C. D., Sioux Center (Carlisle Barracks, Pa.) ..... 1st Lt., A.U.S.

Story County

Conner, J. D., Nevada (Camp Robinson, Ark.) .... 1st Lt., A.U.S.
Fellows, J. G., Ames (Ft. Leonard Wood, Mo.) ..... Capt., A.U.S.
Lekwa, A. H., Story City (San Diego, Cal.) .. Lt. Comdr., U.S.N.R.
McFarland, G. E., Jr.. Ames (San Pedro, Cal.) .... Lt.. U.S.N.R.
McFarland, J. E., Ames (Farragut, Idaho) .. Lt. Comdr., U.S.N.R.
Rosebrook, L. E., Ames (San Antonio, Texas) ..... 1st Lt.. A.U.S.
Sperow, W. B., Nevada (San Diego, Cal.) .. Lt. Comdr., U.S.N.R.
Thorburn, O. L., Ames (Las Vegas, Nevada) .. Major, A.U.S.

Tama County

Bezman, H. S., Traer (Camp Hood, Tex.) ..... 1st. Lt., A.U.S.
Boller, G. C., Traer (Camp Bowie, Texas)
Dobias, S. G., Chelsea (APO 937, Seattle, Washington)
Havlik, A. J., Tama (Fleet PO, San Francisco, Cal.) . Lt., U.S.N.R.
Schaeferle, L. G., Gladbrook (Fort Leonard Wood, Mo.)
Standefer, J. M., Tama (San Diego, Cal.)

Taylor County

Hardin, J. F., Bedford (Fort Leonard Wood, Mo.)

Union County

Paragas, M. R., Creston (Avon Park, Fla.) ..... Capt., A.U.S.
Ryan, C. J., Creston (Scribner, Neb.) ..... 1st Lt., A.U.S.

Wapello County

Brentan, Emanuel, Ottumwa (APO 252, New York, N. Y.) ..... 1st Lt., A.U.S
Brody, Sidney, Ottumwa (APO New York, N. Y.) .. Major, A.U.S
Gilfillan, C. D. N., Eldon (Battle Creek, Mich.) ..... Capt., A.U.S.
Hughes, R. O., Ottumwa (Coronado, Cal.) .. Lt. Comdr., U.S.N.R.
Moore, G. C., Ottumwa (Carlisle Barracks, Pa.) .... 1st Lt., A.U.S.

Nelson, F. L., Jr., Ottumwa (Camp Gruber, Okla.)..Capt., A.U.S.
Prewitt, L. H., Ottumwa (March Field, Cal.).....Major, A.U.S.
Selman, R. J., Ottumwa (El Paso, Texas).....Lt. Col., A.U.S.
Struble, G. C., Ottumwa (Fort Harrison, Ind.)....Lt. Col., A.U.S.
Whitehouse, W. N., Ottumwa (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Worley, C. L., Ottumwa (Camp Young, Cal.).....Capt., A.U.S.

Warren County

Fullgrabe E. A., Indianola (Bethesda, Md.) Lt. (jg), U.S.N.R.
Hoffman, G. R., Lacona (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.
Shaw, E. E., Indianola (APO 827, New Orleans, La.) .....Capt., A.U.S.
Trueblood, C. A., Indianola (Camp Campbell, Ky.)..Capt., A.U.S.

Washington County

Boice, C. L., Washington (Atlantic City, N. J.).....Lt., U.S.N.
Droz, A. K., Washington (Grosse Ile, Mich.).Lt. Comdr., U.S.N.R.
Mast, T. M., Washington (Portland, Ore.).....Lt. U.S.N.R.
Stutsman, R. E., Washington (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Ware, S. C., Kalona (A. P. Hill Mil. Res., Va.).....Capt., A.U.S.

Wayne County

Hyatt, C. N., Jr., Humeston (Indio, Cal.).....Capt., A.U.S.

Webster County

Baker, C. J., Fort Dodge (APO New York, N. Y.)...Capt., A.U.S.
Burch, E. S., Dayton (Camp Livingston, La.).....Capt., A.U.S.
Burleson, M. W., Fort Dodge (Vancouver, Wash.,..1st Lt., A.U.S.
Coughlan, C. H., Fort Dodge (Jefferson Barracks, Mo.) .....Major, A.U.S.
Dawson, E. B., Fort Dodge (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Glesne, O. N., Ft. Dodge (Great Lakes, Ill.)..Lt. Comdr., U.S.N.R.
Joyner, N. M., Fort Dodge (Brooklyn Field, Ala.)
Kluever, H. C., Fort Dodge (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Larsen, H. T., Fort Dodge (Baltimore, Md.)...Lt. (jg), U.S.N.R.
Shrader, J. C., Fort Dodge (APO 180, Los Angeles, Cal.) .....Major, A.U.S.
Thatcher, O. D., Fort Dodge (APO 634, New York, N. Y.) .....Capt., A.U.S.
Thatcher, W. C., Fort Dodge (APO 464, New York, N. Y.) .....Capt., A.U.S.
Van Patten, E. M., Ft. Dodge (Alamogordo, N. M.).1st Lt., A.U.S.

Winneshiek County

Fritchen, A. F., Decorah (APO San Francisco, Cal.) .....Comdr., U.S.N.R.
Hospodarsky, L. J., Ridgeway (Seattle, Wash.)..Capt., A.U.S.
Larson, L. E., Decorah (Farragut, Idaho).....Lt., U.S.N.R.
Svendsen, R. N., Decorah (San Diego, Calif.)..Lt. (jg) U.S.N.R.
Van Besien, G. J., Decorah (Fort Leavenworth, Kan.) .....1st Lt., A.U.S.

Woodbury County

Bettler, P. L., Sioux City (APO San Francisco, Cal.) .....Major, A.U.S.
Blackstone, M. A., Sioux City (Pittsburg, Cal.).1st Lt., A.U.S.
Boe, Henry, Sioux City (Salina, Kan.).....Capt., A.U.S.
Burroughs, H. H., Sioux City.....Lt. (jg), U.S.N.R.
*Cmeyla, P. M., Sioux City (APO San Francisco, Cal.) .....Capt., A.U.S.
Cowan, J. A., Sioux City (Oklahoma City, Okla.) .....Major, U.S.P.H.S.
Crowder, R. E., Sioux City (San Diego, Cal.).Lt. Comdr., U.S.N.R.
Dimsdale, L. J., Sioux City (Clinton, Iowa).....1st Lt., A.U.S.
Down, H. I., Sioux City (Camp Breckenridge, Ky.) Major, A.U.S.
Elson, V. J., Danbury (APO 702, Seattle Wash.)....Capt., A.U.S.
Frank, L. J., Sioux City (Mare Island, Cal.).Lt. Comdr., U.S.N.R.
Graham, J. W., Sioux City (San Diego, Cal.).Lt. Comdr., U.S.N.R.
Grossman, M. D., Sioux City (APO 4591, San Francisco, Cal.) .....Capt., A.U.S.
Heffernan, C. E., Sioux City (Salt Lake City, Utah) .....1st Lt., A.U.S.
Hicks, W. K., Sioux City (Spokane, Wash.).....Major, A.U.S.
Honke, E. M., Sioux City (Palm Springs, Cal.)..Capt., A.U.S.
Kaplan, David, Sioux City (Fort Bragg, N. C.)..1st Lt., A.U.S.
Knott, R. C., Sioux City (Atlanta, Ga.).....Capt., A.U.S.
Krigsten, W. M., Sioux City (Springfield, Mo.)..Lt. Col., A.U.S.
Lande, J. N., Sioux City (El Paso, Texas).....Major, A.U.S.
Martin, R. F., Sioux City (Camp Atterbury, Ind.).1st Lt., A.U.S.
Mattice, L. H., Danbury (APO 4580, San Francisco, Cal.) .....1st Lt., A.U.S.
McCuistion, H. M., Sioux City (APO New York, N. Y.) .....Capt., A.U.S.
Mugan, R. C., Sioux City (Gowen Field, Idaho)..1st Lt., A.U.S.
Osincup, P. W., Sioux City (Edgewood Arsenal, Md.) .....1st Lt., A.U.S.
Rarick, I. H., Sioux City (APO 980, Seattle, Wash.)..Capt., A.U.S.
Reeder, J. E., Jr., Sioux City (Modesto, Cal.)....Capt., A.U.S.
Ryan, M. J., Sioux City (Topeka, Kan.).....Capt., A.U.S.
Schwartz, J. W., Sioux City (Ft. Leavenworth, Kan.) .....Lt. Col., A.U.S.
Tracy, J. S., Sioux City (Ephrata, Wash.).....Capt., A.U.S.
Wilson, L. L., Sioux City (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.

Worth County

Westly, G. S., Manly (APO 4580, San Francisco, Cal.) .....Major, A.U.S.

Wright County

Aageson, C. A., Dows
Bird, R. G., Clarion (Sacramento, Cal.).....Lt. Comdr., U.S.N.R.
Doles, E. A., Clarion (Phoenix, Ariz.)
Leinbach, S. P., Belmond (Farragut Air Base, Idaho)
Missildine, W. H., Eagle Grove (APO 25, San Francisco, Cal.) ..... Capt., A.U.S.

(*) Reported missing in action
(†) Reported killed in action.
(‡) Reported prisoner of war.

MEDICAL OFFICERS NEEDED FOR FEDERAL CIVILIAN WAR SERVICE

The critical shortage of physicians to engage in vital war work in the civilian branches of the Government continues. The great need for these men resulted in the announcing of a liberalized civil service examination for medical officers in 1941. The Civil Service Commission has just revised and re-announced this examination.

The twenty optional branches under which doctors may apply range from general practice to aviation medicine. Those appointed will perform professional duties as doctors of medicine in active practice in hospitals, in dispensaries, or in the field or in rural areas; or in bureaus of the Government such as the Veterans Administration, Civil Aeronautics Administration, Public Health Service, and Food and Drug Administration. Doctors will also be used in industrial establishments under direction of the War Department.

Applicants for all grades must have received the degree of M.D. from an accredited medical school. Applicants for the Senior Medical Officer grade ($5,228.00 a year) must have had at least five years of appropriate medical experience; for the Medical Officer grade ($4,428.00 a year), three years of experience in addition to a required internship; and for the Associate Medical Officer grade ($3,828.00 a year), one year of internship. The salaries quoted include overtime pay.

There are no written tests and no age limits. Persons now using their highest skills in war work should not apply for these positions. Appointments in Federal positions are made in accordance with War Manpower policies and employment stabilization plans. Before a definite offer of appointment is made, those eligible are cleared through the Procurement and Assignment Service for Physicians, Dentists and Veterinarians, of the War Manpower Commission.

Persons rated eligible on the Medical Officer examination of 1941 need not file applications again unless they consider that they now possess qualifications for eligibility in a higher grade or different option.

Further information and application forms may be obtained at first and second-class post offices, Civil Service Regional Offices, and the Commission in Washington, D. C.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. W. S. REILEY, Red Oak
President-Elect—MRS. J. C. DECKER, Sioux City
Secretary—MRS. A. G. FELTER, Van Meter
Treasurer—MRS. A. E. MERKEL, Des Moines

Annual Reports of County Auxiliary Presidents

Cass County

We had meetings in September, 1942, and March, 1943. We donated $5.00 to the kit bag fund of the Red Cross and $5.00 to the Nurses Loan Fund. We have placed *Hygeia* in the Atlantic Public Library and city rest room. We have sewed for the Atlantic Hospital and are 100 per cent in the purchase of war bonds. Our meetings are dinners with the doctors in the hospital dining room. Mrs. Mulsow, our state president, was present in March. Book reviews have been presented.

Mrs. R. L. Barnett, President

Dallas-Guthrie Society

The Dallas-Guthrie Auxiliary of twenty-six members meets four times each year when the doctors have their dinner and study. After the pleasant dinner hour, we gather for an educational program based on the topics suggested by the state program committee. During the past year papers have been presented on nutrition and the latest scientific developments in medicine. Our *Hygeia* chairman presented highlights from that magazine and our legislative chairman kept us informed on pending bills and wrote our legislators in behalf of compulsory smallpox vaccination and aid for dependent children.

We were fortunate to have our state president, Mrs. Mulsow, with us for the July meeting.

A recent survey shows that all members are active in defense work and the buying of war bonds. Health programs have been promoted by most of the auxiliary members in their respective communities. By means of individual donations, to date, the sum of $30.00 has been paid to the Nurses Loan Fund; it is our major project for the year. Five members take the *Bulletin*.

Until gas rationing made it difficult we, with our husbands, met each month for dinner and bridge. These affairs were excellent builders of morale and good will.

Mrs. A. G. Felter, President

Dubuque County

The Auxiliary to the Dubuque County Medical Society held four business meetings during the year.

The ladies met Tuesday afternoons to sew for the Red Cross and Friday afternoons to sew and mend for Mercy Hospital. Several of the ladies knit for the Red Cross. We also furnished cookies for the USO Center at Savanna.

Two of the ladies have given full time at the Red Cross surgical dressing rooms, as chairman and assistant, and a third lady has given three-fourths time. One of our members completed the Red Cross nutrition class and has won her bars for Nurses Aide.

We secured twenty-five subscriptions to *Hygeia*.

All of the ladies are kept very busy with war work so that we have no planned programs.

Mrs. H. M. Pahlas, President

Montgomery County

Our auxiliary is a small group but comprises a membership of fifteen active women. Each member is busy in her own community and cooperates in her own way with community projects to the best of her ability. The original purpose of organizing our auxiliary was to further acquaintance among the doctors and their wives and to encourage attendance at county medical society meetings. This aim has been accomplished, since after six or seven years of organization we have learned to know each other and the county medical society has excellent attendance at its meetings.

Looking over the past year, we do not have a big report to make. However, we have met regularly and a few things have been accomplished. First of all, when the new Murphy Memorial Hospital was opened last spring, the auxiliary members served as hostesses with hospital personnel and trustees at open house. We gave a gift to the hospital and later took upon ourselves the responsibility of sewing, making towels and linen room supplies. The auxiliary donated $5.00 to the Nurses Loan Fund.

All members enjoyed very much the privilege of entertaining two state presidents, Mrs. Hornaday last year and Mrs. Mulsow this year in April. Each of these occasions gave us the pleasure of knowing our state president. We feel honored to have our own Mrs. Reiley, who was the first president of our

auxiliary, as the new state president, and we shall try to the best of our ability to give her our support.

Husbands of four of our members are in service.

Mrs. C. C. Nelson, President

Polk County

The Woman's Auxiliary to the Polk County Medical Society held six meetings from March, 1942, until January, 1943: The March 3 meeting consisted of a luncheon at the St. John's Lutheran Church, followed by a program at which Dr. Thomas Burcham gave a talk on emergency medical services in Civilian Defense. On May 5 we met at the Broadlawns Tuberculosis Hospital in a benefit bridge party for the student Nurses Loan Fund. A musicale and tea was held at the home of Mrs. Julius Weingart on October 6. The program consisted of a group of piano numbers and a play review. The November 3 meeting was held at the Iowa Lutheran Hospital in the Nurses Home. A popular medical program was presented by the Department of Pathology. Tea and refreshments followed. The December 1 meeting was another benefit bridge party for the Nurses Loan Fund. It was held at the Y. W. C. A. On January 5, 1943, we met for luncheon at Younkers Tea Room. This was a business meeting, consisting of the annual reports and election of officers for the ensuing year.

During the year we have made a special point of inviting as guests the wives of physicians who are in military service located near Des Moines, those from the Veterans Hospital, Fort Des Moines and Camp Dodge.

I should also mention that we had as extra features of the meetings interesting and educational talks by Mrs. Bruner and Mrs. Glomset, as well as the enjoyable play review by Mrs. Priestley.

During the entire year, two afternoons a month, groups of us prepared and served sandwiches and coffee at the USO Center to the soldiers and sailors of our army and navy forces. All our members contributed to this most generously and unselfishly.

Mrs. J. S. Weingart, President

Pottawattamie County

The Pottawattamie County Medical Auxiliary had a busy and worried year. About half of our members, of course, are not here and the other half have done a fine job attending our auxiliary meetings and carrying on outside war work.

For eight months, from April until November, we sewed on kits which were presented to the soldiers before they left for camp. They were nicely made and filled with all the necessary toilet articles, as well as many other useful things—sewing materials, writing pad, Bible, cards, etc. Our auxiliary made and filled twelve of these kits, and in addition made several dozen more.

We entertained at a breakfast the graduate classes from the two hospitals and had a large attendance and a fine time. We also helped put over the naval drive for funds and had a generous response from the doctors and dentists. As usual, we gave a basket of food and clothing to a needy family at Christmas time.

I am sure we shall have a busy and anxious year, wishing each month that our great conflict will end so that we may all be together again.

Mrs. Grant Augustine, President

Woodbury County

When the Sioux-Mes-Dames, or Woodbury County Auxiliary, was organized a good many years ago, it was chiefly to promote sociability among the doctors' wives of Sioux City and Woodbury County. Having started that way, and having only four meetings a year, it has been a rather difficult problem to get them interested in any kind of charitable work as a group, although we did put over the Cancer Control drive for several years. This year, however, it seemed advisable to drop that for the duration. Nearly our whole membership is working in some type of war work. One member is influential in the organization of the "Grey Ladies," of which there are now one hundred or more in Sioux City working in all our hospitals, including the large one at the Air Base. Many others are making surgical dressings and doing canteen work for the soldiers, so that while we may not be working as a group, we are doing our share as individuals. We contributed $5.00 to the Nurses Loan Fund.

Of the four meetings during the year, two are teas and two are luncheons, usually held in the homes of members. At the June, 1942, meeting we were entertained beautifully by the talented young children of several of our members. This was a breakfast at the Country Club. The September meeting was a tea held in the artistic new home of one of our group. Much time was spent touring the grounds and house. Later, we were entertained by a talk on the Community and War Chest Fund and a piano solo. The annual Christmas party was a luncheon in the Martin Hotel. A silver offering amounting to $9.00 was collected for the Goodfellows Fund. We planned to send notes on Christmas cards to members who were with their husbands at army bases.

Very few doctors' wives throughout the county were able to attend meetings this year because of the tire situation.

This was not the year for the Sioux Valley meeting in Sioux City, but our auxiliary always entertain the doctors' wives who attend that meeting.

This year there are a number of doctors at our Air Base whose wives were all invited to attend our March tea. Several of them were present. That was a banner meeting, since we were honored with a visit from our state president, Mrs. Mulsow, who

(Continued on page 406)

SOCIETY PROCEEDINGS

Fayette County

The Fayette County Medical Society held a dinner meeting, Thursday evening, June 10, at Pine Lodge in Oelwein. Dr. James D. Parker of Fayette and Dr. Thomas N. Walsh of Hawkeye were awarded certificates and pins for having completed fifty years in the practice of medicine. Dr. Clifford D. Mercer of West Union, who was unable to be present because of illness, was awarded a certificate as a life member of the Iowa State Medical Society.

Hardin County

The regular monthly meeting of the Hardin County Medical Society was held Tuesday, July 27, at the Pearl Schwarck Tea Room in Eldora. Edmund G. Zimmerer, M.D., of the State Department of Health was the guest speaker of the evening and spoke on Immunizations Successful in Today's Practice.

Pocahontas County

Members of the Pocahontas County Medical Society were entertained at the home of Dr. Charles L. Jones in Gilmore City, Friday evening, June 4. The guest speaker of the evening was Edmund G. Zimmerer, M.D., of the State Department of Health, who outlined the efforts being made by health authorities to combat the cancer menace.

Sac County

The Sac County Medical Society held a meeting in Sac City, Thursday evening, June 3, at which time Walter R. Fieseler, M.D., of Fort Dodge spoke on Stones and the Urinary Tract.

Scott County

The annual picnic of the Scott County Medical Society was held Wednesday afternoon, July 14, at the Shorey Farm south of Pleasant Valley.

L. J. Miltner, M.D., Secretary

Taylor County

The Taylor County Medical Society met in Lenox Monday, July 19, at Hotel Lenox. A business session was held at the close of the dinner hour, following which the scientific program was presented. William H. Cash, M.D., of Lenox discussed Medical Supervision During Gravidity; Charles E. Buckley, M.D., of Blockton spoke on Hyperemesis of Pregnancy; Roe B. Reed, M.D., of Clearfield presented a short paper on Preeclamptic Toxemia; George W. Rimel, M.D., of Bedford outlined The Treatment of Eclampsia; and James H. Gasson, M.D., of Bedford presented a Case Report on Eclampsia. The main feature of the meeting was the showing of the film, The Prevention and Treatment of Eclampsia, which was prepared by Joseph B. DeLee, M.D., of Chicago.

W. H. Cash, M.D., President

PERSONAL MENTION

Dr. James A. Greene, who has been associate professor in theory and practice at the State University of Iowa College of Medicine since 1932, has accepted a position as head of the department of medicine and dean of the clinical faculty at Baylor University College of Medicine in Houston, Texas.

Dr. William Corns, who has been assistant surgeon at the Iowa Soldiers' Home in Marshalltown during the past nine years, resigned July 1 because of ill health and has moved to Tama.

Dr. Leslie A. Carlson, who has practiced in Fayette for the past few years, has located in Albuquerque, New Mexico. Dr. Carlson moved from the state because of his health.

Dr. John W. Donnell of Hudson has retired from active practice because of ill health and has moved to Oelwein, where he plans to make his home.

Dr. Howard R. Hess of Cedar Rapids has retired from the active practice of medicine because of ill health. Dr. Hess plans to remain in Cedar Rapids.

MARRIAGE

Miss Elaine Thies of Waterloo, daughter of Mr. William Thies of Shelby, and Dr. Richard W. Driver of Waterloo, were united in marriage, Thursday afternoon, June 10, in the Christ Episcopal Church in Waterloo. Following a short trip, the couple will be at home in Waterloo where Dr. Driver has been engaged in the practice of medicine for several years.

DEATH NOTICES

Shellito, Amos G., of Independence, aged eighty-two, died June 30 following an illness of several months. He was graduated in 1882 from the College of Physicians and Surgeons of Baltimore, and at the time of his death was a life member of the Buchanan County and Iowa State Medical Societies.

Talbott, Eugene Finch, of Grinnell, aged sixty-nine, died June 24 of coronary thrombosis. He was graduated in 1895 from the University of Illinois College of Medicine, and at the time of his death was a life member of the Poweshiek County and Iowa State Medical Societies.

History of Medicine in Iowa

Edited by the Historical Committee

Dr. Walter L. Bierring, Des Moines, Chairman
Dr. Henry G. Langworthy, Dubuque, *Secretary*
Dr. John T. McClintock, Iowa City
Dr. Murdoch Bannister, Ottumwa
Dr. Frank E. Sampson, Creston

Medical History of Woodbury County

William Jepson, M.D., Sioux City

Part I

In contemplating the medical history of the area of which Woodbury County is a part, one quickly comes to realize that within the brief period of what might well be a lifetime of ninety years, there has been enacted here all the stages of man's progression through savagery and barbarism to the highest order of civilization.

Medical services as rendered to the inhabitants has been conditioned, first by the stage of advancement to which the civilization at any period has progressed, and second, by the knowledge and training of those who ministered to the needs of medical care.

Inasmuch as the knowledge of the sciences of bacteriology, pathology, and chemistry had not as yet advanced to a stage where they could do more than convey hopes of their future services, there existed no foundation upon which a rational concept of etiology, sanitation, or therapeutics could rest.

Since the medical lore of that and earlier periods consisted of garnered experience, and since the accuracy or inaccuracy of this was not susceptible of demonstration or proof, medicine was to a large degree in a state of chaos and ministrations to the sick were empirical.

The Indian medicine man, the most important lay person, the charlatan, and the most highly educated medical man vied with one another for public favor. Those were the "Golden Days" for all who wished to ply the "healing art." The state had no laws regulating the practice of medicine until 1886. This law was intended to protect the uninformed public against the employment of incompetent services in time of illness through certification of those who were supposed to be competent. That the law has succeeded in its intentions is possibly open to question, evidence of which will be shown later.

There existed no clear understanding of the causes of the various diseases, and there could exist no rational treatment. The result was that there developed many fantastic ideas concerning their causes and treatment, some of which found sufficient support by the public to lead to the establishment of so-called colleges to indoctrinate their ideas into the minds of those who aspired to practice the "healing art." There have existed in our country fifty-six such colleges to diffuse the views of the homeopaths, eclectics and physiomedicos, two of these schools being medical departments of state universities of two of the reputedly most literate states in our Union. They have all passed out of existence except two, which have discarded their old views so that there no longer exists in our country any colleges whose teachings are not based upon the revelations of science, unless you would call institutions teaching such concepts as those of chiropractic and osteopathic schools.

Until 1888 there were no hospitals or other aids and facilities in caring for the sick in the city. In fact, there existed no need for hospitals at that time, except as places for restraint of insane individuals, and the care of that small number of patients was the subject of operative interference. The discovery of the anesthetic properties of ether and chloroform in 1846 and 1847 had given an impetus to surgical work in that it permitted surgery to be painlessly endured by the patient. However, the surgeon's hands were restrained and limited to amputations, ovariotomus cutting for stone, and a few minor procedures by reason of the invariable bad results following his work due to his failure to understand the rôle played by bacterial infection of wounds. Hospitals for the isolation and care of patients with contagious diseases, care of tuber-

culous patients, and the extensive laboratory facilities provided by many cities were yet to be provided, as were health departments.

There had not yet developed a need for trained nurses, since the services rendered to the sick consisted in supplying their simpler wants, which were rendered by members of the immediate family or volunteering neighbors. While this was expensive in lives, it promoted altruism. This altruism, however, is being rapidly dissipated, since man now is supposed to purchase his needs, of its vendors, at a price which has constantly mounted and now has reached a peak which has attracted the attention of state and national consideration.

Taking note of the type of practice pursued by the earlier members of the "healing art," one cannot fail to be impressed by the great number of homeopaths, eclectics, and physiomedicos then plying their trade here as elsewhere in the state, and noticing the absence of these from among the registrants of the present period. Possibly one could be led to think that the level of intelligence on the part of our citizens has risen to a point where they no longer can be and are fooled by such cults. This inference would hardly seem true in the light of the fact that the telephone directory of Sioux City registers fifteen chiropractors and eight osteopaths and one osteopathic hospital and clinic of general surgery, diagnosis, and obstetrics. How many Christian Science practitioners there are connected with its two churches located here is not known. There are eleven listed as doctors under the listing of optometrists, which makes a grand total of thirty-four, plus the Christian Scientists, a number that practically equals, if not exceeds, that of the regular profession in the city after it has been stripped of all the men suitable for service in our military forces.

What need is there for utilizing the people's choice of medical services as evidence of their intelligence or being sane since there is ample evidence on almost every hand to lead one to question this. Thus, more than one of each of our 275 inhabitants are confined in insane asylums within our country, and while those in serious condition are thus confined, one wonders what is the percentage of those who have wandered from the pathway of sane thinking. Approximately one-half of the world's inhabitants are at this time pitted against the other half trying to destroy the property and lives of each, irrespective of age or sex, by every means conceivable, so that their cherished ideologies may prevail. The press, commentators, and others through the radio, glory daily in the number of persons killed and the amount of property destroyed. If this type of thinking is to constitute the criterion of sanity in the future, it must be difficult for some (at present constituting a small minority) to understand how our civilization can endure. However, it may be that this small minority are the ones who are devoid of sane thinking.

Since we are not given the power of seeing ourselves as others see us, and none but our friends would point out to us our blemishes as he sees them, I am led to quote from a recent address to a body of professional men, including ours, by an outstanding jurist of a neighboring state relating how our profession appears to him. After paying a glowing tribute to the services of our profession he proceeded to say: "That you have not fully responded to your professional challenge you would be the first to admit, but you would probably not look in the same direction that a layman would. My purpose is to point the finger of a layman in the direction of some of them. Talk about conservatism! You are the most stubbornly conservative group that it is possible to find. It is popularly known, and some of your number will privately admit, that you will not accept progress in your therapeutic field until and unless it is literally forced upon you. Yours is the profession of healing. Can there be any doubt that in your services you should learn about, use and employ all things conducive to healing? Can there be any excuse for not doing so? Yet in the face and in spite of these self-evident truths you divide yourselves into so-called schools of thought.

"You deny the efficiency of methods and practices of other schools of thought because it was not found and in some was denied by the curricula of the school of which you are a product. You deny the value of numerous old fashioned remedies, the efficiency of which the users have known for generations. In this connection you deny experience in favor of the laboratory 'no' which is always 'no' until as a result of scientific tests it is possible to proclaim a positive 'yes.' You do this with regard to essentially harmless herbs and roots as well as harmless drugs. You positively deny experience until sometimes after years of research and thousands of experiments some scientist has been able from design or accident to say that the emphatic 'no' of success was wrong after all.

"Before we pass on to further criticisms permit me to elaborate upon the criticism already made.

"In the field wherein the numbers are entitled to be called Doctors of Medicine, there are different schools of thought, but I do not choose to discuss them. I only choose to discuss some of those you consider pariahs and parasites upon suffering humanity.

"You scorn the osteopath and yet the number of those is legion who have received comfort and release from suffering from the manipulative ministrations of the osteopath. Some of you today are willing to admit that there is value in this character of therapy and to say that the medical profession has known it all the time. Very well, why do you not use it? You say that you are not equipped for such practices. You are members of the healing profession and your patients are entitled to your best services and your best advice. Why, then, don't you become prepared or send him to someone who is, the osteopath, for instance?

"And then there is the pet peeve of the medical profession, the chiropractor, who is now turning to physiotherapy. Whatever one may think of him generally, it is hard to convince a person who for years had frequent disablement of a shoulder and in an effort to obtain relief consulted numerous physicians without success and then went to a chiropractor and gained relief without subsequent recurrence for several years. That chiropractic therapy is without a modicum of merit is controversial. If it has even a small amount of merit the people you serve are entitled to charge you with negligence if you do not place it in your therapeutic catalog and use it when the occasion demands.

"On the matter of remedies proved by experience, I mention one because it was commented on derisively in a recent issue of the *Reader's Digest*. The doctors say that there is no known specific for ivy poisoning. To say the least they are mistaken. The part of the country from which I came had an abundance of poison ivy. The remedy which we use and which was 100 per cent effective was the same one prescribed by Captain John Smith, except that we used sweet cream with the black gunpowder instead of milk."

LEWIS AND CLARK EXPEDITION

The geographic area which now comprises Woodbury County was, during its dominance by Spain and later for a brief period by France, no doubt visited by Spanish and French fur traders. There exists no evidence of any white settlers in this area prior to the purchase by the United States of the Louisiana Territory from France on April 30, 1803; and there were no American citizens, except Daniel Boone and family and some associates who were located at Charith, a small French settlement on the Missouri River, at that time.

It will be recalled that our President then, Thomas Jefferson, being desirous of having information concerning the Louisiana Territory, had requested Congress to have an expedition organized and equipped to explore the Missouri River from its mouth to its source and then to cross the mountains and explore the Columbia River from its source to the Pacific Ocean. Having received the authority from Congress on January 18, 1803, and an allowance of $2,500.00 to defray the expenses of the expedition, he commissioned his private secretary, Captain Merriweather Lewis, to organize and equip the expedition. This he did by appointing Captain William Clark as his associate and second in command, and enlisting twenty-five soldiers and eighteen or twenty civilians. (Compare the expense of this trip with that of nearly a half million dollars to send Stanley to find Livingstone.)

The expedition was equipped with all conceivable essentials for the trip, such as astronomical instruments for determining the geography of the country, a case of surgical instruments and similarly one of medicines, containing some thirty or more of the drugs most used at that time by the profession, including Laudanum and Kinepox Virus. This latter was replaced by some that Dr. Saugrain of St. Louis had brought with him from Paris, since that with which President Jefferson had supplied Captain Lewis had been found, upon employment by Lewis, to be worthless.

On Monday, May 14, 1804, Captain Clark announced "All Aboard" and the heavy laden bateau and two pirogues swung out into the river from their winter quarters, to the voyagers' chanson:

"A frigate went a sailing,
Mon J'oli coeur de rose,
Far o'er the seas away,
J'oli coeur de rose,
J'oli coeur de rose,
And hills and hollow echoed
Mon J'oli coeur de rose."

Thus commenced our country's exploration of its newly acquired territory, the most thrilling and important in its history.

At a gathering of Otoe Indians on August 9, who had come to smoke the pipe of peace with the white men, much smoking, dancing, and feasting was indulged in. Following this occurred the first serious illness and only death during the expedition. The historian's record of the occasion is: "Sergeant Floyd danced with the rest that hot August night and became overheated. He went on guard duty immediately afterward, and lay down upon a sand bar to cool. In a few moments he was seized with frightful pains. Nathaniel Pryor awakened the Captains stating, 'My cousin is very ill!' All night Lewis and Clark made every effort to relieve the suffering soldier. At sunrise the boats set sail bearing poor Floyd, pale and scarcely breathing. There was a movement of the

sick boy's lips; 'I am going away, I want you to write me a letter.' There on the border of Iowa he dispatched his last message to his old Kentucky home.

"When they landed for dinner Floyd died, August 10, 1804, and was buried upon a nearby bluff by his comrades with due military honors, he being the first United States soldier (if not American citizen) to have died and been buried west of the Mississippi River. This occurred in what is now Sioux City and Woodbury County, Iowa.

"The bluff upon which Sergeant Floyd's body found its final resting place, as well as the small river at its base, is named for him, and a beautiful monument marks his grave."

What was the cause of Sergeant Floyd's death? This is a question that can find no positive answer at this time and there exists no reason for raising it, except that of whether our Government or President Jefferson was negligent in sending forth the expedition without providing it with such adequate medical care as might have been provided at that time, or whether those charged with rendering such services were negligent of their duties.

In the light of events it would appear that no negligence is chargeable to the Government or President Jefferson, under whose immediate direction it was organized, for while it is true the expedition was equipped and sent forth without being accompanied by a graduate in medicine, this fact may well be accounted for through the scarcity of such qualified men in our country at that time. That the expedition was undertaken without provision for fairly competent medical services for those times cannot be said, since Captain Lewis had spent one winter in Philadelphia under the tutelage of Dr. Barton, one of the outstanding medical men of that period, and a second winter with Dr. Saugrain, a Paris graduate who had recently taken up his residence in St. Louis following the fall of the Bastille in Paris, he being an unyielding royalist.

While there is no way of knowing to what extent Merriweather Lewis was possessed of knowledge of the medical science and art as it existed at that time, except through inference, it is fair to assume that it was as great, if not greater, than that of the majority of those practicing medicine at that time. Whatever his knowledge of the science and art of medicine may have been, the fact remains that he did pilot that expedition to the Pacific Coast and back, having traversed an unknown country under the most trying circumstances for a distance of about eight thousand miles, four thousand there and four thousand back, during a period of about two years (from May 14, 1804, to September 23, 1806), without the loss of any of the party except Sergeant Floyd. The party consisted of forty-five, including one woman, Sacajawea and her nursing babe. This must be accepted as evidence that he possessed at least a fair degree of medical knowledge and skill, or else that there existed no need of such skill. That the life of Sergeant Floyd might have been saved by the best of professional skill, even that of the present day, appears unlikely when one considers the sudden onset of the illness and its early fatal termination.

We must admit that Merriweather Lewis was the first United States citizen to practice our art and science in this county, if not in our state, and while he was not an M.D., his knowledge of the essentials of our profession was probably as great, if not greater, than that of many so-called doctors of that period and even of later years. Captain Merriweather Lewis, then Territorial Governor of the territory comprised by the Louisiana Purchase, while on his way to Washington overland on horseback, stopped at the house of Joshua Grinder, about sixty miles southwest of Nashville, Tennessee, where he was evidently murdered on the night of October 11, 1889. Some historians claim, however, that he committed suicide. His body is buried there and marked by a small monument.

End of Part I

(To be continued)

WOMAN'S AUXILIARY NEWS

(Continued from page 401)

gave an inspirational talk about other auxiliaries she had visited in the state. Everyone enjoyed meeting the charming lady from Cedar Rapids. Entertainment was a piano solo by the talented daughter of a past president, in addition to a delightful piano duet by two members of our group.

Officers elected at this meeting were as follows: President, Mrs. C. R. Watkin; Vice President, Mrs. H. S. Gillespie; Secretary, Mrs. P. L. Bettler; and Treasurer, Mrs. I. C. Vangsness.

Looking backward, it was an extremely pleasant year for the president. Mrs. L. R. Tripp, President

SAVE MEDICAL JOURNALS

Dr. Jeannette Dean-Throckmorton, Librarian of the Iowa State Medical Library, located in the Historical Building in Des Moines, is most anxious to receive old copies of medical journals. They should be sent direct to her.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ESSENTIALS OF SYPHILOLOGY—By Rudolph H. Kampmeier M.D., associate professor of medicine, Vanderbilt University School of Medicine; in charge of the Syphilis Clinic and visiting physician to Vanderbilt University Hospital; with chapters by Alvin E. Keller, M.D., and J. Cyril Peterson, M.D. The J. B. Lippincott Company, Philadelphia, 1943. Price, $5.00.

MEDICAL PARASITOLOGY—By James T. Culbertson, assistant professor of bacteriology, College of Physicians and Surgeons, Columbia University. Columbia University Press, New York. 1942. Price, $4.25.

FUNDAMENTALS OF IMMUNOLOGY—By William C. Boyd, Ph.D., associate professor of biochemistry, Boston University School of Medicine. Interscience Publishers, Inc., New York, 1943. Price, $5.50.

WAR MEDICINE—Edited by Winfield Scott Pugh, M.D., Commander (M.C.) U.S.N., Retired; formerly surgeon, City Hospital, New York. Philosophical Library, Inc., New York, 1942. Price, $7.50.

THE 1942 YEAR BOOK OF PHYSICAL THERAPY—Edited by Richard Kovacs, M.D., professor and director of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1942. Price, $3.00.

THE 1942 YEAR BOOK OF GENERAL THERAPEUTICS—Edited by Oscar W. Bethea, M.D., professor of clinical medicine, Tulane University School of Medicine. The Year Book Publishers, Chicago, 1942. Price, $3.00.

THE PRINCIPLES AND PRACTICE OF WAR SURGERY—By J. Trueta, M.D., formerly director of surgery, General Hospital of Catalonia, University of Barcelona; assistant surgeon, Wingfield-Morris Orthopaedic Hospital, Oxford; acting surgeon-in-charge, accident service, Radcliffe Infirmary, Oxford. The C. V. Mosby Company, St. Louis, 1943. Price, $6.50.

DISEASES OF THE SKIN—By Oliver S. Ormsby, M.D., Rush professor of dermatology, University of Illinois, and Hamilton Montgomery, M.D., associate professor of dermatology and syphilology, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, Rochester, Minnesota. Sixth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1943. Price, $14.00.

A MANUAL OF CARDIOLOGY—By Thomas J. Dry, M.D., assistant professor of medicine, University of Minnesota (Mayo Foundation); consultant in section on cardiology, Mayo Clinic. W. B. Saunders Company, Philadelphia, 1943. Price, $3.00.

NEUROSURGERY AND THORACIC SURGERY, Military Surgical Manuals Volume VI—Prepared and edited by the Subcommitttee on Neurosurgery and Thoracic Surgery of the Committee on Surgery of the Division of Medical Sciences of the National Research Council. W. B. Saunders Company, Philadelphia, 1943. Price, $2.50.

THE 1942 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—Edited by J. P. Greenhill, M.D., professor of obstetrics and gynecology, Loyola University Medical School, Chicago; professor of gynecology, Cook County Graduate School of Medicine; attending gynecologist, Cook County Hospital; attending obstetrician and gynecologist, Michael Reese Hospital. The Year Book Publishers, Inc., Chicago, 1943. Price, $3.00.

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BOOK REVIEWS

STARLING'S PRINCIPLES OF HUMAN PHYSIOLOGY

Edited and revised by C. Lovatt Evans, D.Sc., Jodrell professor of physiology in University College, London; the chapters on the special senses revised by H. Hartridge, M.D., professor of physiology at St. Bartholomew's Medical College. Eighth edition. Lea and Febiger, Philadelphia, 1941. Price, $10.00.

This enlarged and revised eighth edition is a standard textbook of physiology and is familiar to all students of physiology. A new arrangement with complete reorganization of the material has added to its effective presentation. The section on the central nervous system has been entirely rewritten and includes the results of some of the more recent investigations. Much new material has been added to the section dealing with reproduction. Chapters on the endocrine organs, vitamins, on urinary secretions, and those parts of physiology which are mainly biochemical, have been revised to include recent advances.

To those who desire a well organized, up-to-date, standard textbook of physiology, this volume is recommended.

A. L. J.

THE 1942 YEAR BOOK OF PHYSICAL THERAPY

Edited by Richard Kovacs, M.D., professor and director of physical therapy, New York Polyclinic Medical School and Hospital. The Year Book Publishers, Chicago, 1942. Price, $3.00.

This book, covering the entire field with abstracted articles, is valuable in indicating where extended information may be found but weak in not discriminating sufficiently between outstanding contributions and others. Of particular interest are the sections on physical education, arthritis and traumatic conditions.

V. A. R.

DISEASES OF METABOLISM

Edited by Garfield G. Duncan, M.D., associate professor of medicine, Jefferson Medical College. W. B. Saunders Company, Philadelphia, 1942. Price, $12.00.

This textbook is replete with all the modern concepts of metabolism. It has been composed in an excellent manner with many illustrations.

The author has secured the assistance of many outstanding authorities, Drs. Walter Bauer, Hugh

R. Butt, Abraham Cantarow, Tracy D. Cuttle, Frank A. Evans, Ferdinand Fetter, Friedrich W. Klemperer, Cyril N. H. Long, Edward H. Mason, Louis H. Newburgh, John P. Peters, Tom D. Spies, Leandro M. Tocantins, and Abraham E. White in composing this informative treatise on metabolism.

The chapters are divided into carbohydrate metabolism, protein metabolism, lipid metabolism, mineral metabolism, water balance, disorders of the blood, vitamins and avitaminoses, obesity, gout, hyperinsulinism, diabetes insipidus, melituria, and diabetes mellitus.

The clinical and laboratory evaluations in each metabolic disorder are detailed and complete, and they go far in solving many complicated daily medical problems.

This volume is a most worthy contribution to an important ever-growing field of medicine.

J. W. C.

ADVANCES IN INTERNAL MEDICINE

Edited by J. Murray Steele, M.D., Welfare Hospital, New York University Division, Welfare Island, New York. Volume I. Interscience Publishers, Inc., New York, 1942. Price, $4.50.

This book is a distinctive contribution to the student of internal medicine. It is a first volume of what I hope becomes a continuous series.

The contents consist of concise discussions by recognized men in their fields, followed by full bibliographies. The authors attempt primarily to bring the subjects up to date, correlating only the pertinent data. Diabetes, sulfonamide therapy, hypertension, and vitamin problems are a few of the subjects covered.

Any physician would profit by reading this small volume.

G. E. M.

OPHTHALMOLOGY AND OTOLARYNGOLOGY

MILITARY SURGICAL MANUALS II

Prepared and edited by the Subcommittees on Ophthalmology and Otolaryngology of the Committee on Surgery of the Division of Medical Sciences of the National Research Council. W. B. Saunders Company, Philadelphia, 1942. Price, $4.00.

This manual is exceedingly well done for the general practitioner who is associated with troops where emergency care of injuries to the eye, ear, nose, and throat is urgent. He can find an outlined emergency care which will give the patient relief and put him in the best possible condition for evacuation to hospitals where further care can be given.

This book should also be an excellent reference book to general practitioners who have to deal with the same type of industrial and home injuries. By following the outline the patient can be cared for until such time as he can be turned over to men doing special work. The "dos" and "dont's" regarding injuries of the eye give the absolute essentials to keep both the patient and the medical officer out of trouble. The formulae for the treatment and care of diseases and injuries are the tested and approved remedies.

The chapter on primary treatment of gunshot wounds of the face, if followed, will save considerable time and prevent cosmetic defects. The chapter on ear from an aviation standpoint is short but concise and covers the main facts which the general practitioner should know if he is associated with air troops. The book, as a whole, is an excellent index giving the essentials of emergency treatment.

J. A. D.

THE 1942 YEAR BOOK OF PEDIATRICS

Edited by Isaac A. Abt., M.D., professor of pediatrics, Northwestern University Medical School, with the collaboration of Arthur F. Abt, M.D., associate professor of pediatrics, Northwestern University Medical School. The Year Book Publishers, Chicago, 1942. Price, $3.00.

As a matter of fact, review of this extremely useful abstract of the year's pediatric literature is hardly necessary for the reason that there are few physicians who are not thoroughly familiar with the entire Year Book Series. The 1942 volume is similar to those of previous years and is again edited by those well known figures in the pediatric world, Dr. Isaac A. Abt and his son, Arthur.

Condensed into some 489 pages under twenty-one chapter headings, the authors have combed the world's pediatric literature and have presented the gist of the articles selected for abstracting. Needless to say, this is an invaluable service to the busy physician. The reviewer recommends this book highly to every practitioner whose practice embraces the care of children.

L. F. H.

THE KENNY CONCEPT OF INFANTILE PARALYSIS AND ITS TREATMENT

By John F. Pohl, M.D., clinical assistant professor of orthopedic surgery, University of Minnesota, in collaboration with Sister Elizabeth Kenny. Bruce Publishing Company, St. Paul, 1943. Price, $5.00.

The symptoms of the acute stage of infantile paralysis and the new concept of treatment, The Kenny Treatment, are clearly and completely covered in this book. Each step of the treatment from the time the diagnosis is made through the period of muscle reeducation is thoroughly discussed. The use of photographs to illustrate all the stages of treatment has clarified points not formerly understood.

This book will serve as a manual to physicians, nurses, and therapists who are concerned with the actual treatment of infantile paralysis.

C. F.

The JOURNAL
of the
Iowa State Medical Society

VOL. XXXIII DES MOINES, IOWA, SEPTEMBER, 1943 No. 9

THE LOCAL USE OF THE SULFONAMIDES IN OPEN WOUNDS*

LEWIS M. OVERTON, M.D., Des Moines

The sulfonamides have rightfully become the most discussed of all chemical therapeutic agents in the last decade, and during the last four years they have received much attention in the care of open wounds. The first report on the local use of the drugs was made by d'Harcourt[1] during the Spanish Civil War. Shortly after this Jensen, Johnsrud, and Nelson[2] reported the results of an experimental study on the local use of sulfanilamide in open wounds. Key and his associates[3] were the pioneers in the clinical use of the drug in the treatment of open wounds. They felt these drugs definitely lowered the incidence of infection. Following these studies a wave of enthusiasm swept the profession and the local use of one of the sulfonamides was accepted by many surgeons as a definite part of the early surgical treatment of any wound. The result has been many enthusiastic reports and the acceptance of the local use of these drugs by our armed forces as a part of the routine treatment of war wounds. The more conservative groups, however, have been fearful that it would lower the standards of the basic care of wounds. This has resulted in studies in an attempt to evaluate the merits of the sulfonamides as local therapeutic agents. At the present time such a study is being undertaken by the National Research Council.[5]

In 1941 I[6] reported a series of open wounds which had been treated primarily by thorough cleansing and debridement only. No local medication was used in 215 of the 247 cases which comprised the series, with an incidence of infection of 0.93 per cent. At that time the local use of the sulfonamides had gained considerable publicity. It was because of this that I undertook to make a clinical study of its use in all types of open wounds. Since that time 356 open wounds have been treated, 285 of which had one of the sulfonamides implanted locally. I now wish to report the results of this study and compare them with those of the series in which no local medication had been used.

All of the patients in the series were seen early during the contaminated stage; that is, during the first six hours following the injury. The principles of good surgical treatment were carried out in each of the cases in the same manner as had been carried out in the series in which no local medication had been used. The drug used locally was either sulfanilamide, sulfathiazole, or a combination of both in equal parts. Sulfapyridine and sulfadiazine were not used locally in the wound because experiments have demonstrated that they are very irritating to the tissues; however, they were used by mouth as an adjunct to the other drugs in the more severe injuries. The technic in all of these cases was as follows: The treatment of the wound was instituted immediately after the patient came under my care. The injured area was inspected to determine the extent of damage. If shock was present, the care of the wound was postponed only for time to combat it. The operator then prepared himself by covering his mouth and nose with a mask, wearing a cap, washing his hands for ten minutes, and then applying sterile gloves. Under general or regional anesthetic a blood pressure tourniquet was applied if the wound had involved an extremity. The bandage was then removed, but not the dressing directly over the wound. The area surrounding the wound was shaved and gently washed with soap and water for at least ten minutes to cleanse it thoroughly. The cleansing always included an area wide enough to allow free access to the wound. The wound itself was then cleansed very gently but thoroughly with soap and water and irrigated with a large quantity of water. Most often this was accomplished by placing the part under a small, low pressure stream of lukewarm water from the tap. The

*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.

operator's gloves were then changed for clean ones. The wound was draped as for any surgical procedure. The skin wound was enlarged sufficiently to allow free access to the entire wound and a debridement was carried out, removing all nonviable tissue but taking the precaution not to destroy or further damage any vital structures. In compound fractures it often became necessary to debride the contaminated bone ends, while in puncture wounds the opening was enlarged and the same technic followed. The wound was again irrigated to remove all loose particles of tissue. Tendons and nerves, if severed, were sutured and fractures, if present, were reduced. The tourniquet was then released and all bleeding controlled with the use of fine catgut as ligatures. All surfaces of the wound were then covered with a thin layer of one of the sulfonamides, and care was taken to avoid placing a pool of the drug at any point. The wound edges were approximated if this could be accomplished without tension. I should like to emphasize that they were only loosely approximated and not tightly closed. No buried sutures were used whenever they could be avoided. When there had been any appreciable loss of tissue, no attempt was made to close the wound. The wound was then packed with gauze to give the tissue support and to allow drainage. In the early cases plain gauze was used, but the growth of granulation tissue through the mesh was so great it delayed healing, and as a result it was discontinued for the use of gauze impregnated with cod liver oil and a 50 per cent combination of sulfanilamide and sulfathiazole. Delayed primary suture was not used in any of the cases. Instead of placing the powdered drug in the puncture wound a 5 per cent solution of neoprontosil was injected into the tissues immediately surrounding the wound. The wound was then dressed and immobilized in a splint. The dressing was not changed until the end of one week unless signs of infection developed. Tetanus antitoxin was given in all cases which had occurred outdoors and in other cases in which there had occurred any appreciable disruption of tissue.

The end results, as shown in Table I, indicate there was no material difference where the sulfonamides were used locally. The study did not include the internal use of the drugs alone; therefore, no statistics are available on this phase of the problem. However, many authors now feel this method gives better results than the local use of the drug. The drugs were given orally as an adjunct to the local implantation in fourteen cases in which there had been considerable tissue disruption. Among this group were six compound fractures in which the tissues had been badly mangled and grossly contaminated. No infection occurred in this group.

TABLE I
Comparison of Results in Present Series With Those of Previously Reported Series

Present Series (356 Cases)

Number of Cases	Local Medication	Infection	No Infection	Percentage of Infection
285	Sulfonamides	4	281	1.42
71	None	2	69	2.89

Previous Series (247 Cases)

Number of Cases	Local Medication	Infection	No Infection	Percentage of Infection
32	Sulfonamides	0	32	0.0
215	None	2	213	0.93

Both Series (603 Cases)

Number of Cases	Local Medication	Infection	No Infection	Percentage of Infection
317	Sulfonamides	4	313	1.26
286	None	4	281	1.39

Some other interesting observations were made in this study. There was a definite increase in the serum in the wound during the first twelve hours. This drainage apparently caused very little disturbance in the healing of the wounds. It was felt that the loose approximation of the wound surfaces allowed the serum to exude from them and thus avoided the separation of the surfaces which would have been produced by the accumulation of serum. For this reason no wound into which the sulfonamides have been implanted should be closed tightly. All wounds which had been approximated, and in which there had been no appreciable tissue loss, were dry and healed when the primary dressing was changed at the end of a week. The results in Table II would indicate the healing period had been longer when the drugs had not been used. The cases in this series, in which the drugs were not used, were relatively clean wounds with no tissue disruptions and, therefore, would heal more rapidly. When this series is compared with the previously reported series, Table III, the results are found to be approximately the same if one considers the limit of normal healing time to be two weeks. The functional results in the cases in which there had occurred severed tendons were not as good as in the cases in which no local medication had been used. The wounds healed promptly, but there were more adhesions of the tendons and it was more difficult to mobilize them, in spite of the fact that I feel my technic of tendon suture and the after care were better in this series than in the previously reported one. Mason[4] showed this was due to an increase of hemorrhage and gelatinization around the tendons. There was no delay in the healing of the fractures in these cases. Several

of the patients had an unexplainable temperature for a few days. The wounds of these patients were clean, the patients were not ill, and there was no discomfort in the wound area. The only thing to which we could attribute this was the presence of sulfonamide in the wound, but we did not know whether it was due to the drug itself or the serum which had been secreted from the irritation of the drugs.

SUMMARY

The end results have been reported in a series of open wounds in which the sulfonamides were used locally as an adjunct to good surgical treatment. The results, when compared with those of a previously reported series, were found to be essentially the same as in those cases in which no local medication had been used. There was a definite increase in the serum formation during the first twelve hours when the drugs had been used, but this did not cause any delay in wound healing.

TABLE II
End Results of Healing Time (356 Cases)
Sulfonamides (Local)

Type of Injury	Number of Cases	Wound Closed	Healing Time (days) 0-7	7-14	14-21	over 21
Lacerations (soft tissue only)	206	130	145	46	8	7
Lacerations with compound fractures	32	29	5	15	5	7
Puncture wounds	47	0	46	1	0	0
Total	285	159	68.77% 196	21.76% 62	4.56% 13	4.91% 14

No Medication

Type of Injury	Number of Cases	Wound Closed	Healing Time (days) 0-7	7-14	14-21	over 21
Lacerations (soft tissue only)	60	15	53	5	1	1
Lacerations with compound fractures	2	2	1	1	0	0
Puncture wounds	9	0	9	0	0	0
Total	71	17	88.73% 63	8.45% 6	1.41% 1	1.41% 1

The results were very encouraging in the severely macerated and badly contaminated wounds which had been treated by good surgery followed by a combination of local and oral use of the sulfonamides. One of the cases was a compound fracture of the lower third of the tibia and fibula, which had occurred in a barnyard. The soft tissues were badly macerated and manure and other debris were driven into the marrow cavity for more than two inches. The wound was treated by thorough cleansing and debridement. This was followed by placing 15 grams of sulfathiazole on the wound surfaces. The fractures were reduced and the wound closed by a sliding graft in order

TABLE III
End Results of Healing Time (247 Cases)
No Medication

Type of Injury	Number of Cases	Healing Time (days) 0-7	7-14	14-21	over 21
Lacerations (soft tissue only)	170	142	22	3	3
Lacerations (with compound fractures)	23	13	6	4	0
Puncture wounds	22	21	1	0	0
Total	215	81.85% 176	13.49% 29	3.26% 7	1.40% 3

Sulfonamides (Local)

Type of Injury	Number of Cases	Healing Time (days) 0-7	7-14	14-21	over 21
Lacerations (soft tissue only)	19	15	2	1	1
Lacerations (with compound fractures)	2	0	1	1	0
Puncture wounds	11	9	2	0	0
Total	32	75% 24	15.62% 5	6.25% 2	3.13% 1

not to leave the entire front of the tibia exposed. Sulfadiazine was then given by mouth for four days. The convalescence was uneventful and the wound had completely healed when the cast was removed at the end of eight weeks.

CONCLUSIONS

1. The local use of the sulfonamides has not improved the results in the treatment of open wounds when used as an adjunct to good surgery during the contaminated stage; however, it was found not to delay the healing time.

2. All of the sulfonamides produced some local tissue irritation as evidenced by the increase in serum and tendon adhesions.

3. The results of this study indicate the local use of the sulfonamides is not necessary in the early treatment of open wounds which can be thoroughly cleansed and debrided. These drugs may produce enough irritation to contraindicate their use in such cases.

4. The use of the sulfonamides may be of definite value when administered in badly disruptured wounds which cannot be thoroughly cleansed and debrided. When combined with the use of one of the drugs by mouth, sulfonamides are invaluable in this type of case.

5. The criteria of good early treatment of any open wound is thorough cleansing and the removal of all contaminated and nonviable material followed by wound support and rest. Under no circumstances should the sulfonamides be substituted for this treatment.

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Discussion

Dr. Keith M. Chapler, Dexter: I believe it is extremely necessary for all of us who see a large number of open wounds to remember that numerous investigators have definitely proved the sulfonamides have no effect on the cellular or the humoral defense processes of the body. It is of extreme importance, then, that we remember not only to perform a careful debridement of open wound tissues in accordance with all sound surgical teachings but also to see that the wound is free from pus and blood and tissue exudates, using irrigations when necessary, before applying the sulfonamide drug locally. Pus and tissue exudates appear to have an antisulfonamide action which is apparently due to the para-amino benzoic acid released from bacteria and also digested tissue. Taking all available statistics into consideration, and also my own experience, I believe there is no doubt but that these drugs do have a direct antibacterial action and that local treatment of wounds with sulfonamides is effective to some degree not only prophylactically but also curatively. It is probable that this bacteriostatic effect of any of the sulfonamide compounds used is directly related to the capacity of the drug to block the enzyme, whose substrate, as previously mentioned, is para-amino benzoic acid, thus disproving any theory that the different sulfonamides are specific for certain bacterial species.

I believe most of us are aware that, generally speaking, there has been a percentage decrease in infections of open wounds since the advent of the various sulfonamide compounds used by the medical profession, and if every wound were treated early such as Dr. Overton has described, the percentage decrease would be even greater.

The use of sulfonamides in the treatment of open wounds was certainly brought forcibly to us who were in attendance at the recent War Sessions of the American College of Surgeons in Omaha, by two top ranking men of the armed forces: Colonel Pemberthy of the Army Medical Corps and Captain Waltman Walters of the Navy Medical personnel. The latter especially emphasized the value of using sulfonamides in wounds. He stated that the mortality rate of those afflicted with wounds reaching one certain base hospital was less than 1 per cent, and this he felt was due not only to good, early surgical management but also in some measure to the early use of the sulfonamide drugs locally. Statistics show that more than 7 per cent of the men wounded in World War I died of their wounds. This figure does not include men killed in action. The Navy lost less than 1 per cent of its wounded men on Guadalcanal. We do not know what credit we can give sulfonamide drugs, which were used routinely, for this astonishingly low percentage, because we know that modern surgical technic is far advanced over that used twenty-five years ago, but I am firmly convinced that the sulfonamides are definitely a decisive factor in the lowering of the percentage of infections.

In closing this discussion I should like to say that in all open wounds, as Doctor Overton has stated, the customary cleansing, control of hemorrhage, and debridement must be carried out as usual. Following this, I have found it profitable to use either sulfathiazole or sulfanilamide powder, sprinkling it evenly into the wounded area, before the suturing is done, and then also to apply a little to the suture line. Usually 3 to 5 grams of the powder is used, depending upon the size and the location of the wound. In spite of my own routine use of sulfonamide compounds in the treatment of open wounds, I do think we must remember, that just because we have these so-called "miracle drugs" at our disposal, we cannot, under any circumstances, forget the criteria of sound treatment for any open wound; namely, treatment of shock, if necessary; control of hemorrhage; complete cleansing of not only the wound itself but also the surrounding area; complete debridement; the proper treatment of any severed tissues such as tendons, nerves or muscles; as well as the reduction of fractures and the use of tetanus anti-toxin. In this present wave of sulfonamide glorification remember, "Be not the first by whom the new is tried, nor yet the last to cast the old aside." In other words, do not let the sulfonamides replace good surgical judgment in your treatment of open wounds.

CARE OF THE PREMATURE INFANT IN GENERAL PRACTICE*

HAROLD E. FARNSWORTH, M.D., Storm Lake

A premature birth means a birth occurring before maturity, a term generally given only to those infants born at least three weeks before the estimated date of delivery, or to those infants who upon examination reveal certain characteristics not found in full term babies.

Prematurity therefore implies an insufficient period of gestation, but it can be understood that even if a premature infant may be normal there exists a developmental as well as a functional immaturity. This, of course, brings into consideration those infants who are congenitally diseased or have a defective vitality, the weaklings. These weaklings are the infants who, although they have spent the normal time in utero, are not functionally or developmentally mature. This may be due to some abnormality or intra-uterine disease, or some disease in the mother which has prevented the normal period of gestation. With

*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.

these conditions overlapping very closely, it is often impossible to differentiate between the premature and the congenitally debilitated.

One cannot classify all infants of low birth weight as premature, nor may one call mature all infants of normal weight and length. One will find mature infants with or without pathologic manifestations, full term infants with debility due to maternal disease and, strangely enough, one will often find normal infants from diseased mothers.

Generally it is not difficult to determine clinically whether or not an infant is premature; occasionally such is not the case. One may be inclined to attach little importance to whether or not an infant is premature, but from the standpoint of the future management it becomes of vital interest. From a medicolegal angle this knowledge is of extreme importance.

In discussing the care and management of the premature infant, we shall consider all infants premature who are born before the thirty-sixth week of gestation, weigh less than five and one-half pounds (2,500 grams) and are less than nineteen and one-half inches (48 centimeters) in length. These infants all differ physiologically and anatomically from a full term infant of normal weight. All infants of low birth weight are not necessarily premature; this low birth weight may be an inherited characteristic. Neither are all premature infants below the average weight of a full term infant. However, full term infants of low birth weight and prematurely born infants require special care, and in the following paragraphs we shall consider as premature those prematurely born infants and immature full term infants coming under the weight classification previously stated.

Prematurity is usually an emergency condition, frequently a precipitate birth. When possible, one should be prepared for premature birth, because often preparedness means the difference between life and death. In case of a precipitate, premature birth, one should know the fundamentals of care so that he may quickly and with little loss of time prepare for the care of the infant. When the possibility of a premature birth is expected, one is, of course, prepared. Two things are of predominant importance at this time: First, prevention of chilling or exposure over too long a time, and second, asepsis.

In the nursery or in the delivery room the incubator or equipment should be kept at a temperature of 98 degrees, or some other form of emergency container should be utilized in which this temperature may be maintained. An incubator need not be an expensive piece of apparatus. A satisfactory one can be made such as the one furnished by the State Department of Health, which consists essentially of a white enamel wood box that may be supported on four legs with roller casters, the cover having an opening the size of which can be regulated by sliding panels. The head of the tray on which the baby lies in the incubator may be lowered to facilitate the removal of mucus from the respiratory passages. The temperature in the box is thermostatically controlled; a humidifier is a valuable addition. When the infant arrives, the temperature of the incubator is adjusted in order to maintain a body temperature of 98 to 99.6 degrees. It is, of course, necessary that the heating unit in the incubator be such that this can be maintained.

Immediately upon birth the infant should be placed in a premature pack, which is made of a sterile absorbent cotton pad covered with two layers of gauze. If these are not available, the infant should be covered so that it will suffer as little chilling as possible. If condition permits and there is no maternal emergency, the cord should be allowed to pulsate for as long as two to three minutes before ligation, during which time the baby will receive from one to two ounces of extra blood. Upon ligation and severing of the cord, the infant should be placed in the incubator. A soft absorbent diaper should be placed at the buttocks to catch any meconium or urine.

Extreme care should be used at the time of delivery to remove mucus from the air passages by a rubber suction bulb or, if available, a catheter attached to a faucet aspiration set; a French No. 14 is usually used. The head should be held dependent so that secretions and mucus which accumulate in the respiratory passages may drain out. However, if there is a possibility of intracranial hemorrhage, the infant should be placed in the horizontal position.

Premature infants should not be bathed during the first ten days of life. The eyes, ears, and nostrils should be cleansed with normal saline and touching surfaces of the body should be cleansed with antiseptic baby oil. Care should be taken to remove thoroughly all excess oil in order to prevent any maceration of these surfaces. During the first sixteen hours the baby should be under the constant observation of the nurse in charge, since during this time cyanosis, respiratory difficulties, convulsions, pallor, or hemorrhage may develop. In such event, resuscitation should be started immediately and performed within the incubator.

In maintaining the body temperature of the premature infant, it is essential that the temperature be taken every four hours the first few days.

After that, twice a day is often enough. The body temperature of the premature infant should be maintained between 98 and 99.6 degrees. Body temperatures below 98 degrees over long periods of time are considered more hazardous than temperatures slightly above 100 degrees. It will be necessary to maintain the temperature of the incubator at 80 to 86 degrees or even higher, depending in each case on the amount of heat required to maintain the temperature described above. The room temperature should be maintained between 78 and 82 degrees. Regulation of the incubator temperature is affected by the thermostat control already mentioned, which regulates the heating units or lights, and also by varying the size of the panel openings, depending on the type of apparatus being used. The humidity of the room and especially the incubator is of paramount importance. The relative humidity of the nursery should be between 50 and 55 per cent; beyond this percentage the effect upon the nurses is too severe. The relative humidity of the incubator should be at 65 per cent saturation, especially in the case of the small premature infant. This relative humidity at 65 per cent saturation is difficult to attain except in the more expensive incubators.

All premature infants should be watched carefully for attacks of cyanosis which occur during the first few days of life, and especially during the first sixteen hours. These attacks are prone to develop suddenly and without warning, especially in the group of infants below 3.3 pounds birth weight. In cyanosis developing shortly after birth, the first thought is the removal of mucus from the respiratory passages. This procedure has already been outlined. The mouth should not be swabbed out with gauze because a slight abrasion of the mucous membranes may occur and infection develop. If the premature infant is cyanotic but breathing after removal of any mucus, oxygen 100 per cent may be used to good advantage. It should be administered by mask or a small tent so that a high concentration of 100 per cent oxygen is obtained. Artificial respiration is often necessary. In this procedure hold the baby by the feet at a forty-five degree angle, the forehead just touching the covering of the tray. Hold both feet with the left hand and place the fingers of the right hand under the abdomen, the thumb over the back. Carry out the artificial respiration about thirty times a minute. Careless handling and too much pressure traumatizes the infant and does more harm than good. Too rapid performance of the artificial respiration is extremely harmful and of no value.

One minim of adrenalin 1:1,000 may be given every hour to the very small premature child until it shows signs of activity. This may be for three or four days, and if such be the case the dose may be increased to a maximum of 3 minims every four hours. If the infant is kept on this routine for several days, the intervals are increased to eight hours, then to twelve, and finally to twenty-four hours until discontinued. Some authorities believe that the adrenal glands in the premature infant are not very active. If there is any evidence or suspicion of intracranial hemorrhage, adrenalin is not used. In its place are used the respiratory stimulants such as coramine or alphalobeline; metrazol may also be used. Coramine can be given in hourly doses of 2 to 3 minims.

If there is evidence of intracranial hemorrhage or hemorrhagic disease of the newborn child, whole citrated blood should be given at once. One-third to one ounce, depending upon the size of the baby, is given deep subcutaneously or intramuscularly. This blood should be Wassermann negative, but it need not be grouped or matched if this method is used. The intravenous transfusion is no doubt of more value, but because of the greater technical difficulties involved the procedure is unpopular. If bleeding persists, the blood should be given every twenty-four hours for two or three days. Hemorrhages from the skin, mouth, rectum and genitals are most likely to occur on the third and sixth days after birth and must be watched for carefully.

The use of vitamin K has aided immeasurably in the treatment of hemorrhagic diseases of newborn infants and should be routinely used in all premature babies for three days beginning as soon as the infant takes anything by mouth. This may be given with or just after the feeding. The procedure here would be 1 cubic centimeter of vitamin K in oil twice a day for three days. In the case of a developing hemorrhagic disease, vitamin K intramuscularly may be used. The knowledge that many newborn and premature infants have low prothrombin blood levels makes the use of vitamin K advisable.

The eyes should be cared for the same as those of any newborn infant. Use 1.0 per cent silver nitrate or 15.0 per cent argyrol, followed by the instillation of normal saline in the conjunctival sacs. Irritation from the silver nitrate is more frequent in premature than in full term infants and follows in six to twelve hours after its use. This inflammation should not be confused with the more serious ophthalmia neonatorum which develops on the second or third days. Fresh silver nitrate only should be used, since old solutions are more likely to produce inflammation. In caring for the mouth and nose great precaution must be used to avoid trauma of the mucous membranes

because of the great danger of secondary infections. After three or four days the anterior part of the nostril may be gently cleaned with small pieces of absorbent cotton and boric acid solution. The mouth should not be cleaned at any time.

Upper respiratory infection with its complications is perhaps one of the chief causes of mortality in premature infants. Anyone with the least sign of respiratory infection should avoid all contact with the infant. Only those in direct care of the premature infant should at any time be admitted to the room in which the baby is kept. Nurses, doctors, and all those attending the premature infant should thoroughly scrub their hands and don masks and gowns before attending the baby.

Skin lesions, especially impetigo contagiosa, must be carefully watched for and treatment started at once. The treatment of impetigo contagiosa is meticulous. While there are probably several methods of successful treatment, the following method will be discussed in detail because it seems to be that which is generally accepted. With a sterile toothpick break the bleb, remove as much as possible of the covering skin and remove any debris or drainage with another toothpick. The raw area should then be touched lightly but thoroughly with 70 per cent alcohol. This should be applied sparingly so that no spread or excess of fluid exists. As soon as this dries, 5.0 per cent gentian violet in alcohol should be applied as sparingly and carefully as the alcohol. Attempt to stay within the confines of the original bleb. If these blebs occur where skin surfaces touch; that is, around the neck, axilla, or groin, let the solution dry before allowing the parts to come in contact. When fresh blebs appear, they immediately should be treated as outlined above. All diapers and clothing which can be should be thoroughly boiled; any other clothing around the baby should be discarded.

Birth weight loss in a full term infant is considered physiologic. This is also true in the premature infant, but its loss of body weight is relatively greater than that in the full term infant. A premature infant regains its birth weight more slowly than the full term infant, and often requires three weeks or more. The birth weight loss of premature infants should not exceed 7.0 to 8.0 per cent of the birth weight. After the first few days of life, the total fluid intake of the infant should be kept at a level of one-eighth to one-sixth of the body weight in each twenty-four hours. The sum total of water and milk determine the total fluid intake.

The generally accepted procedure is to let the premature infant rest for the first sixteen hours after birth; during this time no fluid or feeding of any kind is given. At the end of this period the premature infants with a birth weight of 3.3 pounds (1,500 grams) or less should be offered two teaspoonsful of water every two hours during the remainder of the first twenty-four hours and every four hours thereafter. The amount of the water offered should be increased by two cubic centimeters each time until one ounce is being offered and this amount should be continued for the first ten days. After the ten days three cubic centimeters should be given twice a day, at eight in the morning and four in the afternoon. If the infant has any difficulty in taking the water by mouth, it should be at once stopped and subcutaneous administration started.

Premature infants weighing between 3.3 and 4.4 pounds (1,500 to 2,000 grams) should be given water in the same manner as the infant weighing 3.3 pounds or less. Those weighing 4.4 pounds (2,000 grams) or more should be started on three teaspoonsful (15 cubic centimeters) every two hours, increasing by two cubic centimeters each offering until one and one-half ounces (45 cubic centimeters) is being given, then decreased by two cubic centimeters each time until one ounce (30 cubic centimeters) is given.

On the second day the milk feeding should be started. If breast milk is available, offer one teaspoonful (5 cubic centimeters) of boiled breast milk with 2.0 per cent calcium caseinate every four hours and increase by one cubic centimeter each time up to one and three-fourths ounces (50 cubic centimeters); further increase should depend upon the progress made. The addition of the calcium caseinate to the breast milk definitely reduces the number of cases in which frequent liquid stools develop, thus preventing serious fluid loss through the bowels.

If breast milk is not available, either of two formulas may be safely used with assurance that the infant will readily adapt himself to it. A mixture of equal parts evaporated, unsweetened milk and water with the addition of 3.0 per cent dextrimaltose has given excellent results. Another preparation is gaining favor and the response of the premature infant equals or even surpasses that given to breast milk. This preparation is composed of skimmed milk, virgin olive oil, calcium caseinate, and dextrimaltose with a small amount of halibut liver oil. This mixture is based on the work of Holt, Tow, and Mariott in connection with the absorption of fat and assimilation of protein in the premature infant. This preparation is available in powder form and is used in a dilution of one ounce of powder to five ounces of cooled boiled water; it has a caloric value approxi-

mately the same as breast milk with 2.0 per cent calcium caseinate.

After the second day water should be given every four hours, five times a day; and milk should be given two hours after the water feedings, six times a day. After ten days water should be given only twice a day if the infant is making satisfactory progress.

There will be little increase in weight until about forty-five calories per pound are being given in twenty-four hours, and fifty to fifty-five calories are needed to make a consistent gain. After the first month as much as sixty calories per pound may be needed; it may be necessary to administer as high as eighty to one hundred calories per pound. In fact little attention need be paid to total calories; the best test of a satisfactory and adequate feeding is a steady gain in weight, well tolerated by the infant.

Whole citrated blood should be given to all premature infants early on the second day of life. One-third ounce (10 cubic centimeters) should be given to the small babies and up to one ounce (30 cubic centimeters) to the larger babies. A three-inch 19 or 20 gauge infiltration needle should be introduced deep into the subcutaneous tissue in the kidney region and passed up parallel to the spine to the subscapular region. As the needle is withdrawn the blood should be injected, leaving a column of blood along the length of the back. Collodion and cotton should be used to seal the puncture point. Blood may be injected on both sides. Infants who are not gaining well are often benefited by receiving additional blood.

Additional fluids should be given routinely on the second day of life, two and one-half to five ounces (75 to 150 cubic centimeters) of Ringer's solution or Hartman's solution being given by hypodermoclysis. The needles, 20 gauge intravenous, should be inserted into the inner aspect of the leg just above the knee and passed toward the midpoint of the inguinal ligament. The fluid should be administered very slowly by continuous drip; if the infant is unable to take water by mouth, this method may be continued for several days.

Three methods of giving milk and water may be employed:

1. The catheter or tube feeding is often used. All infants under 4.4 pounds (2,000 grams) must be fed by catheter.

2. A medicine dropper protected by a rubber tip is a good method. The Breck feeder is excellent but has a disadvantage in that it allows too rapid feeding.

3. The usual bottle feeding may be used, but conservation of the baby's strength must here be considered.

When catheter feeding is used, a No. 10 French catheter should be used for small premature infants and a No. 12 for the larger babies. The length of the catheter to be passed should be measured as the distance from the tip of the ensiform cartilage to the bridge of the nose, the average length being about four or five inches. This point should be marked on the catheter so that it will not be passed beyond the mark. A sterile catheter should be moistened with milk or water, the infant held in a semi-recumbent position, and the tube passed by mouth. After quieting the baby, the feeding should be given slowly; when it is completed, the tube should be kinked and quickly removed. The infant should then be supported in a sitting position in the crib to allow for the expulsion of air. During the feeding and for a time after, the infant should be watched to see if it is going to regurgitate; if this occurs the head and shoulders should be lowered and the baby turned face downward. After tube feeding the infant should be placed in a right lateral position.

Premature children over 4.4 pounds (2,000 grams) may often be fed by medicine dropper as previously mentioned. Drop by drop the feeding is placed on the dorsum of the tongue; it trickles down and is swallowed. Infants usually cannot be expected to nurse from the bottle until they approach 5 pounds (2,300 grams) in weight. One should be sure that the baby is swallowing; never allow milk or water to accumulate in the pharynx, since aspiration in that event is inevitable and often results in aspiration pneumonia.

If regurgitation or vomiting occurs, decrease the volume of feeding; it may even be necessary to decrease the interval and give smaller feedings. If the condition persists or frequent watery stools occur, fluids must be given by hypodermoclysis and all feedings should be discontinued for one to three feedings, after which an easily assimilated feeding may be started, gradually increasing to requirements.

In the premature infant under 4.4 pounds (2,000 grams) a water-soluble anti-rachitic vitamin should be started on the tenth to fourteenth day; this may be added to the formula twice daily. At the same time one teaspoonful of orange juice should be given twice a day. Ascorbic acid, 25 to 50 milligrams each day, may be used if orange juice is not tolerated. Premature infants over 4.4 pounds (2,000 grams) may be given one of the cod liver oil concentrates, ten drops twice daily. The orange juice should be given as in the case of the smaller premature child. No oily preparation should be added to the milk formula since

it sticks to the bottle and nipple. In the presence of vomiting or diarrhea, both the cod liver oil concentrate and the orange juice should be stopped for a short time.

All premature infants tend to have a low hemoglobin and should have a hemoglobin determination made by the fifth week; if low, iron administration should be started. One cubic centimeter of a 10.0 per cent solution of ferri et ammonii citras for each pound of body weight (2 cubic centimeters per kilogram) will give excellent results; this may be given in the formula. Liver extract may be given with satisfactory results. One cubic centimeter of 0.05 per cent solution cupric sulphas may be used at short intervals added to the formula with the iron.

In conclusion, the cardinal points in the care and feeding of the premature infant in the order of the importance are:

1. Intelligent nursing on the part of the nurse or mother in close cooperation with the physician.
2. Maintenance of a proper environment from the moment of birth; avoid chilling, keep body warmth at proper level.
3. Prevention of upper respiratory infections and skin disorders.
4. Establishment and maintenance of an adequate fluid intake and feeding regime to assure a steady gain in the weight of the baby.

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Discussion

Dr. Clarence P. Phillips, Muscatine: The infant mortality rate has had a great deal of scanning in the last few years. Because the premature infant had such a high rate, the leaders of the field have given it a great deal of consideration, and justly so.

I believe Dr. Farnsworth has done a very good job in outlining the essentials of treatment and, for the most part, given adequate emphasis on all points. There are a few points which will stand even more emphasis than that given.

First, it has been estimated that from 40 to 50 per cent of the calcium of the body is acquired in the last thirty days of gestation. For that reason, rickets requires a great deal more prophylactic care than it would in a full term baby. The secondary anemias of the premature child have been adequately brought out by Dr. Farnsworth.

It seems to me that the care of the premature infant might be summarized in a slightly different order than that which Dr. Farnsworth gave, although practically the same. First is absolute quiet. I believe that is the most essential factor—freedom from handling, not taking temperatures every few hours, not bathing the premature infant, not weighing it as frequently as you would a mature baby, doing everything possible within the incubator or the container in which it is housed, doing as little as absolutely necessary to maintain that baby.

Second is the right food, properly given. Some people seem to have a great deal of success in obtaining human milk. Personally, my results have been disappointing. I have had a great deal of difficulty in maintaining adequate mother's milk for the mothering of that baby. Therefore, I have welcomed the preparation which Dr. Farnsworth mentioned. Also, the method of giving the baby its food is important. There is a tendency, I think, on the part of a great many nurses to give it by the easiest route to the nurse rather than the easiest route to the baby. It is also felt by a great many that the milk should not be given too rapidly to an infant. I think we all realize that a person can put a catheter down, and pour the milk down about as fast as one wishes, without any gastric upset on the part of the infant and, the easier that the baby gets it, the better it is for the baby.

The proper temperature regulation has been brought out very well by Dr. Farnsworth. However, there is one point, and that is that the air which is respired by the baby need not be over 70 degrees. The air surrounding the baby, that coming in contact with the body as a whole, often requires up to 99 degrees.

There is also the possible avoidance of respiratory infection. I believe that the freedom from handling, the proper food and, more particularly, one other item—humidity control—has more to do with the avoidance of respiratory infections than the wearing of cap and mask, and so forth, by the attendants. In the first place, humidity control is instituted because of the tendency to have dehydration of the body of the infant. That can be overcome, to a great extent, by keeping up the relative humidity of the air surrounding the baby. Then, also, the upper and lower respiratory infections are greatly reduced by keeping the relative humidity of the air breathed by that baby at a fairly high level.

I note that the relative humidity suggested by Dr. Farnsworth is ideally set at 65 degrees. To suggest at least 50 to 55 per cent relative humidity, because of the comfort to the nurses in the nursery, there has been a table worked out. This I obtained from a rather recent revision of a text which Dr. Jeans is preparing in which he states that a baby weighing one and one-half pounds requires a temperature of 97.5 degrees but that the relative humidity is best at 34 per cent; that a two pound baby requires 91.5 degrees and 40 per cent humidity. Then that goes on up to a five pound baby requiring a temperature of only 75 degrees with relative humidity up to 65 per cent.

I believe that with the higher humidifications which are strongly advocated, with which I heartily agree, even greater care must be taken to see that there is the proper change of air, since suffocation seems much easier with increased humidification than with-

out. You have all had the experience of being in a temperature fairly high with great humidification, without any air blowing or any ventilation at all, and noted the intense suffocation that you had. Also, in making a croup-tent for an infant, with the sides down, the humidity very high and the temperature fairly high, you have seen that child fight for air until you raised the sides of the curtain and allowed a change of air. Therefore, when you raise the humidity, which you should when you raise the temperature to the right degree, care should be taken that either oxygen or a proper change of air is made, and to avoid suffocation and that increased respiration which results.

I think that many incubators do not allow for an adequate change of air. They have a slit in the top which can be regulated, but there is no change of air to speak of. There is no full draft drawing through. I believe that point should be watched in all incubators.

Dr. Robert H. McBride, Sioux City: The discussion by Dr. Farnsworth and Dr. Phillips leaves little to be said in regard to the premature infant. Dr. Farnsworth has given you a classical discussion of what should be done. I think far too often many of these things are not done.

He brought out the point that the possibility of a premature birth is an emergency. It is as much of an emergency as an appendectomy or a mastoidectomy, and it should have the same care and the same forethought in providing all the things that are necessary to its management.

The thing which I think needs to be stressed a little further, although Dr. Farnsworth brought it out, is the fact that the size of the baby is no indication of the degree of prematurity; a baby that is large may still be very premature and a baby that is very small may be maturely developed. It is a matter of the development of his internal organs rather than the amount of his weight.

I should like to say just one word about the fluid supply for the infant. It is a little difficult many times to ascertain exactly how much the baby has been getting, whether he is in the hospital or in the home. I think the best criterion of the adequacy of the baby's fluid intake is the amount of urine the baby passes. If the baby is voiding at long intervals, and if the urine is concentrated, no matter how much fluid that child has been taking, it is not enough; if he is voiding freely, even if he seems to be getting a small amount of liquid, that amount is adequate.

We have all had the experience of having premature children look very well until about the third day and then suddenly die, seemingly without any particular cause. There are two reasons for that, I think; one is an undiscovered intracranial hemorrhage or unsuspected intracranial hemorrhage. This occurs far more often than we ordinarily suspect. The other thought I have is one given me by a man in general practice and I have used it rather freely; that is, these children are in need of Antuitrin S; if children who are born prematurely are given small amounts of Antuitrin S daily, sometimes two or three times a day, they do not seem to have the same tendency to collapse that the child has who is not so treated. I do not know what it does to them, but it is the best tonic I have ever been able to find. I give small amounts of Antuitrin S three or four times a day for the first eight or ten days for the very small premature infants. I think I have received good results with the addition of Antuitrin S to the things that Dr. Farnsworth has outlined for you.

TREATMENT OF MENINGOCOCCIC MENINGITIS*

RESULTS IN TEN CASES

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Since the introduction of meningococcic antitoxin by Ferry[1] in 1931, and Hoyne's[2] demonstration of its efficacy in a large series of cases in 1935, there have been numerous papers dealing with new methods of treating meningococcic meningitis. In 1937 Schwentker[3] reported ten cases in which sulfanilamide was administered by mouth, subcutaneously, and intrathecally, with one death. Gregory,[4] in 1940, reported 113 patients who were treated by various methods. There was a fatality rate of 41.8 per cent among those treated with antimeningococcic serum, 42.4 per cent among those in which antitoxin was used, and 17.2 per cent when sulfanilamide was given. The complications in his series were confined to the patients who received antitoxin. Eighty-two patients were treated with sulfapyridine by Dingle,[5] who reported seven deaths in that group. Of the seven deaths one was in a patient with diabetic acidosis, three occurred shortly after admission, and one was attributed to obstructive hydrocephalus; in two instances the disease progressed without complications, but terminated fatally in spite of drug and serum therapy. Every one of eleven patients whom he later treated with sulfadiazine recovered. Further review of the literature shows that several series of patients have been treated with sulfapyridine, sulfathiazole, and sulfadiazine; the latter drug is preferred by most clinicians because of the minimum toxic effect it produces. However, in ten cases in which Hodes[6] administered sulfadiazine without fatality, gross hematuria, lasting two days, was encountered twice; both of these patients recovered without any evidence of permanent impairment of kidney function.

During the winter of 1942-1943, ten patients with meningococcic meningitis were treated at the State University of Iowa Hospitals. All recov-

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ered without serious complications. These cases were sporadic, but most of the patients presented the characteristic clinical picture of acute meningococcic meningitis. Eight of the patients had a history of severe headache, vomiting, stiff neck, chills, and fever of not more than forty-eight hours' duration. Six were stuporous, and all were severely ill. Six patients were restless and uncooperative. Each of the patients had a stiff neck, a positive Kernig's sign, fever, and high pulse and respiratory rates. Two patients had choked disks. All of the group had cloudy spinal fluids, with cell counts ranging from 2,000 to 17,000 polymorphonuclear leukocytes per cubic centimeter. The spinal fluid chemical changes were characteristic of the disease; eight fluids showed a gram-negative intracellular Diplococcus. In each case the initial spinal fluid culture was reported as containing Neisseria intracellularis.

Treatment was started immediately after the initial examination of the spinal fluid, following the rule that pyyogenic meningitis should be considered meningococcic until proved otherwise. We felt that the administration of a sulfonamide and meningococcic antitoxin was indicated, although good results had been reported from the use of sulfonamides alone. Sulfapyridine was used first in all cases.

In the treatment of such a dangerous infection as this, it is essential to administer as quickly as possible enough of the sulfonamide to provide the blood and body fluids with a concentration sufficient to halt the spread of infection. In stuporous patients the first doses of the drug were given intravenously. An initial dose of 6 grams of sodium sulfapyridine, dissolved in 800 cubic centimeters of sterile distilled water, was given by this route. We usually repeated this dose until a total of 15 to 18 grams of the drug had been given within the first twenty-four hours. During the second twenty-four hours, 10 to 12 grams of sodium sulfapyridine were given intravenously. Blood sulfapyridine levels were followed, and an attempt was made to keep them between 12 to 15 milligrams per 100 cubic centimeters. The concentration of free sulfapyridine in the spinal fluid was usually between two-thirds and four-fifths of that in the blood. By the third day the patients were able to take the drug orally, and it was given in doses of 1 gram every four hours. If the blood level varied from the desired optimum, the dose was increased or decreased as necessary. We continued this dose for forty-eight hours after the temperature was normal if the patient appeared to be getting along well; then a dose of 1 gram every six to eight hours was given for the succeeding forty-eight hours. If, at the end of that time, there was no recurrence of symptoms and the temperature was normal, the drug was discontinued. The average duration of drug therapy was eight days. Patients able to take the drug orally from onset were given an initial dose of 4 grams of sulfapyridine, 2 grams every four hours for two doses, and then 1 gram every four hours. This schedule of dosage resulted in a satisfactory blood concentration in most instances.

The signs of toxicity produced by sulfapyridine were nausea and vomiting, drug fever, and gross hematuria. Nausea and vomiting did not necessitate stopping the drug. On the ninth day of drug therapy one patient developed an unexplainable elevation of temperature. Physical and laboratory examinations, including the spinal fluid, were negative. Sulfapyridine therapy was stopped, and the patient's temperature returned to normal in twenty-four hours. Two patients developed gross hematuria, one on the third day and the other on the second day of treatment. No sulfa drugs were given thereafter until the urine became negative for blood. One patient showed no further signs of the disease. The second patient continued to run an elevated temperature, and the spinal fluid contained 2,000 polymorphonuclear leukocytes. Sulfadiazine therapy was started and continued satisfactorily without return of the hematuria.

Eighty thousand to one hundred thousand units of meningococcic antitoxin in 800 cubic centimeters of saline solution were given intravenously as soon as the diagnosis was made. In one instance antimeningococcic serum was used because meningococcic antitoxin was not available at the time. One hundred thousand additional units of antitoxin were given to the acutely ill patients on the second day of treatment. This dose concluded the antitoxin therapy. We purposely omitted intrathecal administration of antitoxin. Six patients developed serum sickness on the fourth to twelfth day after the administration of the antitoxin. Symptomatic treatment consisted of calamine lotion with 1.0 per cent phenol for the urticarial lesions, 3 to 5 minims of adrenalin subcutaneously as often as necessary, and, in the refractive cases, morphine sulfate subcutaneously.

Six of the patients were irrational and extremely restless, and sedatives were necessary. Fifteen to twenty-five cubic centimeters of paraldehyde in cottonseed oil were given as a retention enema. It was often necessary to repeat this every four to six hours. In addition, some patients received 1.87 to 3.75 grains of sodium amytal intramuscularly with each dose of the paraldehyde. Two patients were given 2 to 4 cubic centimeters of paraldehyde intravenously. Morphine sulfate

SUMMARY OF FINDINGS

Case	Age	Clinical Features								Spinal Fluid					Therapy							Course	
		Duration—hours	Headache	Stiff Neck	Vomiting	Drowsiness	Delirium	Coma	Petechiae	Turbidity	Cells	Sugar	Smear*	Culture**	Route of Administration	Total Dose—gms.	Duration—days	Blood Level†	Toxic Effect	Antitoxin	Toxic Effect of Antitoxin	Temperature Normal—hours	Hospital Stay—days
I	21	6	?	4+	0	....	3+	3+	0	3+	5,000	0	+	+	I. V. P. O.	61	9	14	Drug fever	Serum	Hives Joint Swelling	38	23
II	17	48	2+	3+	2+	3+	1+	0	0	3+	3,500	9	+	+	I. V. P. O.	59	9	8	Hematuria	150,000U	0	24	15
III	26	72	2+	2+	2+	1+	1+	0	0	4+	8,000	5	+	+	P. O.	32	8	7	0	100,000U	Hives	16	14
IV	23	8	2+	3+	1+	1+	0	0	2+	3+	6,400	5	+	+	I. V. P. O.	49	11	12	0	80,000U	Hives Fever	30	16
V	46	48	4+	4+	2+	....	4+	3+	2+	4+	10,000	10	—	+	I. V. P. O.	60	9	14	0	120,000U	0	124	14
VI	23	24	2+	4+	2+	1+	1+	0	1+	3+	2,700	0	+	+	I. V. P. O.	42	5	10	N	80,000U	Hives	20	15
VII	18	12	1+	3+	1+	2+	1+	2+	2+	4+	17,000	0	+	+	I. V. P. O.	58	10	14	N V	80,000U	0	60	19
VIII	22	10	2+	4+	1+	—	2+	2+	0	2+	3,000	10	+	+	I. V. P. O.	31	3	11	Hematuria	100,000U	Hives	18	16
IX	21	24	3+	4+	2+	—	3+	4+	0	3+	5,000	0	+	+	I. V. P. O.	40	7	14	0	120,000U	0	14	16
X	25	48	2+	4+	1+	....	2+	3+	0	2+	3,000	10	+	+	I. V. P. O.	30	8	10	0	100,000U	Hives	20	16

1+ = mild
2+ = moderate
3+ = marked
4+ = severe

*+ = positive for gram-negative intracellular Diplococcus
**+ = positive for Neisseria intracellularis
† = Milligrams per 100 cubic centimeters

was not used to quiet these restless patients because we were afraid that, even in small doses, it might have a depressing effect on the respiratory mechanism.

A daily fluid intake of 4,000 to 5,000 cubic centimeters was maintained. An attempt was made to keep the minimum fluid output above 1,000 cubic centimeters per day. In six cases the daily intake was maintained by intravenous or subcutaneous administration of fluid. Physiologic saline solution or 5.0 per cent dextrose in distilled water was used.

It was necessary to check the bowel and bladder control of these patients carefully. Sterile catheterization was done every eight hours until the patient could void spontaneously. An enema was given every three days if the patient was constipated. When the temperature was above 104 degrees, alcohol sponge baths were given. Blood transfusions were not necessary in this series of patients. They can be used as an adjunct to routine therapy if the patient continues to be severely ill after several days of treatment, or if anemia develops during chemotherapy. Close attention was given to the care of the skin. Such complications as bed sores, stomatitis, and infection of herpetic lesions were avoided by expert nursing care.

Headache was the most troublesome symptom. Repeated lumbar punctures were done on one patient for the relief of severe headache. However, a combination of 10 grains of aspirin orally and 1 grain of codeine sulfate hypodermically was used as often as necessary for the relief of this symptom.

CASE REPORT I

K. V., twenty-one years of age, was admitted to the Neurology Service of the University Hospitals at 10:00 a. m. on December 12, 1942, in a semistuporous condition. The following history was obtained from an outside source: On the day prior to admission the patient was seen by the local physician because of upper respiratory symptoms of twenty-four hours' duration. His temperature was 102.4 degrees. He was placed in bed and given routine symptomatic therapy. At 8:00 p. m. of that day the temperature was 101.8 degrees; nothing unusual was noted. At 5:00

a. m. on December 13, the patient was found thrashing around in bed, groaning and moaning. On examination he was found to be combative and uncooperative to all tests and attempts at examination, but bilateral, horizontal, slow nystagmus was noted and the neck was rigid. The patient was given morphine, and transferred to the State University of Iowa Hospitals.

Physical examination showed that the patient was combative and uncooperative; he had marked stiffness of the neck, a positive Kernig's sign, a temperature of 104 degrees, a pulse rate of 130, a respiratory rate of 28, and bilateral, horizontal, slow nystagmus. The spinal fluid was under an initial pressure of more than 300 millimeters of water; it was cloudy, and contained 242 milligrams of protein per 100 cubic centimeters, 680 milligrams of chloride per 100 cubic centimeters, no sugar, and 5,000 cells, practically all of which were polymorphonuclear leukocytes.

A diagnosis of meningococcic meningitis was made. The patient was immediately given 45 cubic centimeters of antimeningococcic serum intravenously, and by the same route 6 grams of sodium sulfapyridine, dissolved in 250 cubic centimeters of sterile distilled water. Immediately after the injection of the serum the patient developed marked urticaria which was treated by the subcutaneous injection of a total of 1.5 cubic centimeters of adrenalin. During his first twenty-four hours in the hospital the patient received 18 grams of sodium sulfapyridine in distilled water intravenously, 90 cubic centimeters of antimeningococcic serum intravenously, and 4,800 cubic centimeters of fluids intravenously. On the morning of December 14 the patient continued to be restless and unresponsive. The temperature was then 100 degrees, and the pulse rate was 96. The blood sulfapyridine was 11.6 milligrams per 100 cubic centimeters of blood. During the patient's second hospital day he received 90 cubic centimeters of serum and 12 grams of sodium sulfapyridine intravenously. Toward evening the temperature became normal and the patient responded to simple commands. The fluid intake for the day was 4,800 cubic centimeters, half physiologic saline and half 5.0 per cent glucose. On December 15 the temperature was normal. The patient received 9 grams of sodium sulfapyridine intravenously in two doses, and 4,000 cubic centimeters of fluid. On December 16 the patient was oriented and cooperative. His temperature was normal. He was able to take fluids and drugs by mouth. The blood sulfapyridine level was 14.0 milligrams per 100 cubic centimeters of blood. The spinal fluid contained 270 polymorphonuclear leukocytes, the sugar was 44 milligrams per 100 cubic centimeters, and the culture was reported as showing no growth. One gram of sulfapyridine was given orally every four hours. On December 18 the patient's temperature suddenly rose to 103.8 degrees. A diagnosis of drug fever was made, and all chemotherapy discontinued. The temperature fell gradually and, on December 23, reached normal. The patient's minimum daily output was 1,015 cubic centimeters. The subsequent course was uneventful, and the patient was discharged on the twenty-third hospital day.

CASE REPORT II

J. L., eighteen years of age, was admitted to the Isolation Ward of the University Hospitals on March 19, 1943, in a stuporous condition. The informant stated the patient had been well until the morning of the day of admission, at which time he complained of nausea but no pain. The temperature at that time was 102 degrees. During the day the patient vomited twice. At 10:30 p. m. of the day of admission the patient was found in a semistuporous condition and was brought immediately to the University Hospitals.

On admission, the patient's temperature was 104.6 degrees, his respiratory rate was 30, and his pulse rate 140. He was stuporous and restless. The neck was very stiff, the deep reflexes were hyperactive, the throat was injected, and there were petechiae on the extremities. Kernig's sign was present. The initial spinal fluid pressure was 390 millimeters of water. The fluid was cloudy and contained more than 5,000 polymorphonuclear leukocytes per cubic centimeter. The protein was 572 milligrams per 100 cubic centimeters, there was no sugar, and the chlorides were 690 milligrams per 100 cubic centimeters. Gram's stain of the fluid showed gram-negative intracellular Diplococci, and the culture was later reported as showing Neisseria intracellularis.

A diagnosis of meningococcic meningitis was made. The patient was immediately given 6 grams of sodium sulfapyridine intravenously in 250 cubic centimeters of sterile distilled water, followed by 80,000 units of meningococcic antitoxin. Eighteen grams of sodium sulfapyridine were given during the first twenty-four hours of treatment. The fluid intake for this period was 3,750 cubic centimeters. On March 20 and March 21 the patient was restless and semistuporous. On these days the blood sulfapyridine level was above 12 milligrams per 100 cubic centimeters of blood. On March 22 the temperature was normal and the patient was conscious. He had no complaints. Spinal fluid examination showed 1,400 polymorphonuclear cells per cubic centimeter, and the culture was later reported as showing no growth.

During the next week the patient continued to show steady improvement. Drug therapy was continued until the ninth hospital day. On the last three days of this period the dose was 1 gram every six hours. The minimum fluid output was 950 cubic centimeters. On the eighth hospital day the patient developed a generalized urticarial rash which was treated with 0.5 cubic centimeter of adrenalin subcutaneously and calamine lotion with 1.0 per cent phenol locally. Spinal fluid examination on March 26 showed 88 lymphocytes; chemically, the fluid was normal.

The only sign of drug toxicity was a slight amount of nausea and vomiting. A total of 58 grams of sulfapyridine was administered.

The patient was discharged on the nineteenth hospital day wihout any complications.

OUTLINE OF MANAGEMENT OF MENINGOCOCCIC MENINGITIS

I. Diagnosis
   A. History—headache, nausea, vomiting, fever, chills, stiff neck, mental changes.
   B. Physical findings—mental changes, fever, stiff neck, positive Kernig's sign, petechiae.
   C. Spinal fluid
      1. Turbid.
      2. Many polymorphonuclears.
      3. Sugar—low.
      4. Protein—high.
      5. Pressure—elevated.
      6. Gram's stain—gram-negative intracellular Diplococci.
      7. Culture—positive for Neisseria intra-intracellularis.

II. Special therapy
   A. Sulfa drugs—sulfadiazine or sulfapyridine.
      1. Blood level of 12 to 15 milligrams per cent optimum.
      2. If drug reaction develops, force fluids and change or discontinue drug, depending on the patient's condition.
   B. Antitoxin
      1. 80,000 to 100,000 units in saline intravenously first day.
      2. Repeat initial dose on second and third days if necessary.
      3. Treat reactions symptomatically.

III. General therapy
   A. Isolate patient—attempt to find source of infection.
   B. Diet—liquid or soft.
   C. Fluids—over 4,000 cubic centimeters per day orally or intravenously.
   D. Sedation
      1. Paraldehyde—per rectum or intravenously.
      2. Sodium Amytal — intramuscularly or intravenously.
      3. Codeine and aspirin for pain.
   E. Bowels and bladder—enema plus catheterization.
   F. Blood transfusions—for falling count.
   G. Fever—symptomatic.
   H. Quarantine—three weeks.

Note:—Since this article was written, six additional patients with meningococcic meningitis have been treated by the authors. All recovered without complications.

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GLIOMA OF THE OPTIC NERVE*

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The most common tumor of the optic nerve is glioma, but there have been less than three hundred examples of this type of tumor described in all the medical literature.[1] During a period of thirty-six years at the Massachusetts Eye and Ear Infirmary, only four such tumors were removed from 669,857 new patients. From the Wills Hospital in Philadelphia, DeLong[2] reported that during a period of twelve years only one such tumor was found in 230,742 patients admitted. The ratio between gliomas of the optic nerve and sarcomas of the choroid has been found to be about one to two hundred.[1]



Fig. 1. U. S. Army Medical Museum, Neg. No. 47269. Gross specimen of eyeball and tumor.

Hudson[3] found that these tumors are more common in the female by a ratio of seven to four, that

*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.

most of them occur in the first decade of life, and that injury is a predisposing cause. The earliest symptom is gradual loss of vision, which is followed by the slow development of exophthalmos. Pain is never a marked symptom. The optic disk generally shows evidence of papilledema, or optic atrophy, and vision is usually gone by the time surgery is performed.

Verhoeff[4] reported on the histologic examination of the tumors in eleven cases, three of which had been removed at the Massachusetts Eye and Ear Infirmary over a twenty-seven year period. The sections of the remaining eight had been collected from his colleagues. He states that other types of tumors start with a small focus and increase in size by continuity of growth, whereas gliomas of the optic nerve do not increase in size by invading or destroying the original nerve structure, but enlarge by causing the pre-existing neuroglia in the vicinity of the growth to proliferate.



Fig. 2. U. S. Army Medical Museum, Neg. No. 47501. Sagittal section of eyeball and tumor.

He finds no two tumors exactly alike, but divides them into three main types: The finely reticulated type; the coarsely reticulated type; and the spindle cell or coarsely fibrillated type. Some of the tumors consist of all three types.

Gliomas of the optic nerve have no tendency to return, even after incomplete removal.

CASE REPORT

History: A boy ten years of age presented himself with the complaint of a protruding left eye of two years' duration. He had had the usual childhood diseases, there was no history of injury, and the family history was entirely negative. At no time had he complained of pain.

Physical Examination: There was marked exophthalmos of the left eye, but normal ocular movements were retained. There was no pulsation or tenderness. He did not have light perception in the left eye. The fundus showed marked atrophy of the optic nerve but was otherwise negative. His right eye was entirely normal and had 20/20 vision. The general and serologic examinations were negative. A roentgenogram showed no erosion of the orbital walls.

Treatment: The eyeball and tumor of the optic nerve were removed en masse.

Pathologic Report: Colonel J. E. Ash, Curator of the Army Medical Museum, kindly furnished the following report:

"Situated approximately 1.2 centimeters behind the eyeball is a tumor, fusiform in shape, measuring 4.5 centimeters in length and 3.5 centimeters in diameter. Grossly the optic nerve may be seen to enter the tumor. The plane of section is such that the optic nerve is not well identified within the tumor. There is, however, a contained structure reminiscent of the optic nerve.

"Surrounding the tumor is a fairly continuous covering of dura. The tumor itself presents a varied architecture. Cords or septae of heavily nucleated tissue, not unlike trabeculae, interweave and intertwine throughout the section. One such septum separates a nodule from the main tumor. The component cells are spindle shaped and have bipolar processes like those of spongioblastic cells. No palisading is noted.

"In the compartments between the 'trabeculae' just described, the tumor tissue is very loosely knit and loculated. Processes of the component cells are in continuity with one another, hence form a delicate reticulated syncytium. Such cells are mostly star-shaped and have moderate sized nuclei. They resemble astrocytes. In various parts of the section there are many unquestioned astrocytic forms. Here and there in the syncytium or its vicinity, one notes a number of large cells with poorly defined nuclei: these are the so-called cytoid bodies characteristic of gliomas of the optic nerve. No myxomatous cells are seen.

"The tumor as a whole is quite vascular. Hemorrhages are noted but these are probably the result of the operation. The presence of hemoglobin-laden macrophages indicates, however, that hemorrhage occurred also prior to operation. Most of the vessel walls are somewhat hyperplastic but

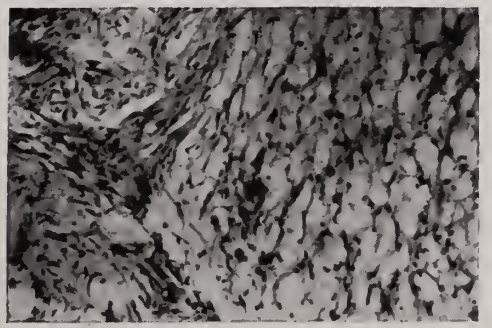


Fig. 3. U. S. Army Medical Museum, Neg. No. 71368. Microscopic section of tumor.

otherwise are not remarkable. A few of the vessel walls have undergone hyalinoid change; here and there a wall is heavily invaded by polymorphonuclear leukocytes. In some regions the tumor cells are arranged radially around blood vessels. Necrotic areas are conspicuous.

"Opinion: Glioma of the optic nerve, chiefly coarsely fibrillated type, composed mainly of astrocytic and spongioblast-like cell forms."

The boy made an uneventful recovery and has remained in excellent health.

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THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

ORAL LESIONS IN THE LEUKEMIAS

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With increasing knowledge of the leukemias there has come a better appreciation of the fact that associated with them are infiltrations of almost any organ in the body. Of late years those which occur in the oral cavity have created much interest. They are important not only because they occur in many cases but also because they may be the first sign of the underlying condition. Therefore, it behooves physicians and dentists to be alert to the significance of these lesions and when they occur, not to be led astray by the local manifestation but to consider the possibility of a systemic condition. In our series of necropsies there have been nine cases of leukemia and the more salient features as related to this article are briefly summarized in the following abstracts:

CASE ABSTRACT I

The patient, a white woman fifty-eight years of age, had been known to have myelogenous leukemia for a year and a half. She had received radium treatment at the Mayo Clinic, but shortly before death developed petechial hemorrhages of the skin and buccal mucosa. The necropsy showed infiltration of most of the viscera by the immature granulocytes.

CASE ABSTRACT II

The patient, a white man fifty-four years of age, had noticed general weakness for six months, during which time he had lost forty pounds in weight. He had marked pyorrhea alveolaris. The white blood cell count on admission was 256,000 per cubic millimeter with nearly all the cells being immature granulocytes. A diagnosis of acute myelogenous leukemia was made. The patient died within ten hours of admission to the hospital. The necropsy showed infiltration of the liver, spleen, kidneys, and gingivae by the immature granulocytes.

CASE ABSTRACT III

The patient, a white woman sixty-six years of age, had complained of vague pains across the small of the back for several years. This had become worse during the preceding year and because of it she was unable to stand erect. She also had itching over the entire body, which was aggravated by bathing in hot water. Six months before she had noticed hemorrhages beneath the skin. She also had had several nose bleeds which had required packing. One week before death she developed a sore mouth with bleeding of the "gums." Before further studies were made the patient died. The necropsy showed myelogenous leukemia with infiltration of all the viscera and also of the lumbar vertebrae.

CASE ABSTRACT IV

The patient, a white boy two years and nine months of age, was first treated by a dentist for "sore gums." This was thought to be due to fusospirochetosis. Since the gingivae did not respond to treatment and because the child's general condition became worse, he was referred to a physician who sent him to the hospital. There the patient was described as a pale, sick-appearing boy with a swollen face and a glossy skin through which veins could be seen. Discrete swollen lymph nodes could be felt on each side of the neck, but they were larger on the left side. The gingival papillae were greatly swollen and had almost buried the crowns of the teeth (Fig. 1). The gingivae and the crowns of the teeth were covered by a dirty gray exudate and on pressure foul smelling, dirty exudate exuded from the undermined gingivae. At the angle of the left jaw there were pieces of necrotic tissue which, when removed, disclosed a bright red bleeding ulcer. The tonsils were moderately enlarged. Smears showed large numbers of the spirochetes and fusiform bacilli of Vincent's infection. The blood examination made the diagnosis clear. The white blood cell count was 83,600 with 54.0 per cent monocytes; 2.0 per cent abnormal lymphocytes;



Fig. 1. Sketch showing the hypertrophied necrotic gingivae almost burying the crowns of the teeth (Case IV).

12.0 per cent lymphocytes; 17.0 per cent polymorphs; 10.0 per cent basket cells; 3.0 per cent myelocytes; and 2.0 per cent blast cells. The diagnosis of acute monocytic leukemia was made. The child died on the sixteenth day after his original visit to the dentist. At necropsy, sections of the gingivae showed gangrene with numerous monocytes in the necrotic exudate beneath the epithelium. The lymph nodes, spleen, and other viscera were also infiltrated with the monocytes.

CASE ABSTRACT V

The patient, a white boy two years of age, was admitted to the hospital because of "nose bleeds, anemia, irritability, and weakness." On routine examination petechiae of the enlarged tonsils, blood crusts in each nostril, edema of the face, pallor, and enlarged cervical lymph nodes were the important features. The blood examination showed 58,600 white blood cells, with lymphocytes and basket cells making up 92.0 per cent of the cells. Most of the lymphocytes were immature forms. A diagnosis of acute lymphatic leukemia was made. The lymphoblasts rose to 196,000 and the patient had many hemorrhages from the mouth, nose, and gastro-intestinal tract. He died approximately three months after the onset of symptoms. At necropsy there was infiltration of all the viscera, including the genitalia, by immature lymphocytes. There were numerous hemorrhages of the skin and into the oral mucosa, stomach, and intestines.

CASE ABSTRACT VI

The patient, a white woman twenty-seven years of age, entered the hospital with the complaint of "a sore throat with bleeding of one week's duration and fever." At that time her gingivae were swollen and covered with a dirty grayish exudate which extended back over the right tonsil. The white blood cell count was 188,800 with 95.0 per cent immature lymphocytes. A diagnosis of acute lymphatic leukemia was made. A notable feature was that after one blood transfusion the white count fell to 163,600, and after a second it fell to 82,400. Neutrophils almost completely disappeared. In spite of the reduced number of lymphocytes, the gingivae remained as on admission and toward the end the patient had hemorrhages from the nose and vagina. The patient died on the eleventh day after the onset of the sore throat. At necropsy many of the viscera were infiltrated with immature lymphocytes and frequently clumps of the cells were surrounded by hemorrhages.

CASE ABSTRACT VII

The patient, a white woman forty-seven years of age, had what was considered influenza three months before admission. Later she suffered from pains which jumped from joint to joint, and two weeks before admission she was confined to bed because of them. She also had developed a distressing nonproductive cough. Ten days before admission she developed a sore mouth, and this later involved the lips. On examination, other than the stomatitis only a severe secondary anemia was noted, and this was thought to be aplastic anemia. White blood cell counts on two occasions showed 12,000 cells but nothing unusual was noted in routine differential examinations. She died rather unexpectedly on the sixth day in the hospital. At necropsy the diagnosis was in doubt until the bone marrow was studied and the picture characteristic of myelogenous leukemia was found. Clinically, it was of the subleukemia type. No cell infiltrations were found in the microscopic slides of the viscera.

CASE ABSTRACT VIII

The patient, a woman seventy-six years of age, was admitted because of weakness, fatigue and cough. It was thought that she had tuberculosis. The white blood cell count was 4,650 and it was noted that most of the lymphocytes were immature forms. After bone marrow studies were made, a diagnosis of subleukemic lymphatic leukemia was made. The patient died within four days after admission but no symptoms occurred in the oral mucosa.

CASE ABSTRACT IX

The patient, a white woman forty-eight years of age, was admitted with a complaint of "sore gums" which had begun thirteen days before. Outside the hospital the white blood cell count was 120,000 and in the hospital it was 260,000, nearly all of which were immature lymphocytes. The examination showed a gangrenous ulceration of the gingivae around the upper incisor teeth. The

gingivae were very painful and the cervical lymph nodes were somewhat enlarged. In spite of local treatment and blood transfusions she rapidly grew worse and died with signs of purpura. At necropsy many of the viscera showed minute hemorrhages and on microscopic examination these were found associated with accumulations of lymphoblasts. The gingivae were gangrenous and infiltrated with the lymphoblasts.

COMMENT

Lesions of the buccal cavity varying between pyorrhea alveolaris or hemorrhages of the tonsil and frank gangrenous gingivitis were encountered in all but one of these cases. The exception was a patient with subleukemic lymphatic leukemia. The majority of the cases were acute and the impression was that the more acute the course of the disease the greater were the changes in the buccal mucosa. The most striking changes were in the boy with acute monocytic leukemia in which the crowns of the teeth were submerged in the hypertrophied gangrenous gingivae (Case IV). While not as extensive, a somewhat similar picture was encountered in acute lymphatic leukemia (Case IX).

GENERAL DISCUSSION

Numerous articles concerning the oral manifestations of the leukemias have appeared in recent dental and medical literature.[1, 2, 3, 4, 5 and others] All stress that dentists and physicians should not regard the oral cavity as an entity, but rather consider that the mouth has often the same relation to the body as the eye grounds and frequently reflects underlying systemic disorders. While there are numerous conditions in which lesions like those encountered in leukemia are found in the oral cavity, it is only through a methodical consideration of all the factors that an exact diagnosis can be made. Severe sepsis, agranulocytosis, thrombocytopenia purpura, scurvy, hemophilia, aplastic anemia, noma and severe fusospirochetosis may all present similar local signs, and it is only through adequate studies of the blood and bone marrow that the diagnosis can be made in the leukemias. While in many cases a leukocyte count and study of the stained blood smear are all that are needed, the subleukemic forms of the disease, which are often mistaken for aplastic anemias or some infection, are best diagnosed by the study of the bone marrow.

Forkner[6] has stated that "In acute monocytic leukemia, diffuse swelling of the gingivae with a tendency for the teeth to become submerged in the gums is encountered in the great majority of cases." He believes that the lesion is almost always pathognomonic of this type of leukemia. Osgood[7] found that gingival swelling was present in eighty of eighty-eight cases in which the gingivae were mentioned. That other types of leukemia may in exceptional cases give a similar picture is shown in case nine, and in general the diagnosis is only made clear after the blood studies are completed. Certainly the oral lesions are not pathognomonic of any single type of leukemia.

The dentist's attitude should be one of extreme reluctance to do any but palliative and supportive treatment in the presence of either acute or chronic leukemia. Any operative procedure, except for fillings, may be accompanied by extensive and even uncontrollable hemorrhage which may be followed by great aggravation of the disease. Simple extraction may cause early and fatal termination.

In acute leukemias no form of therapy has proved to be of much value. General supportive measures, including blood transfusions and symptomatic therapy, should be used to keep the patient comfortable. In chronic leukemias, in addition to supportive and symptomatic measures, x-ray irradiation and recently the use of artificially produced radioactive isotopes, especially radioactive phosphorus, has been shown to be of value. Fowler's solution seems to be of value in some cases of chronic myelogenous leukemia and blood transfusions may be given as indicated.

Note:—I wish to express my appreciation to the members of the medical staff of Finley Hospital for the use of their clinical and necropsy records.

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State Department of Health

Walter L. Bierring

PREVALENCE OF POLIOMYELITIS

Issues of the Weekly Statement, the morbidity report received each week from the United States Public Health Service, show that poliomyelitis has been unduly prevalent in certain states during the past several months. The following table contains figures to indicate the number of cases of this disease as notified to the Public Health Service from California, Texas, Oklahoma, Kansas, Missouri, and Iowa for the weeks ending Saturday, from April 2 through August 7, 1943 (through August 21 in Iowa):

TABLE I
REPORTED PREVALENCE OF POLIOMYELITIS IN SIX STATES—1943
From the Health Officers' Weekly Statement as Issued by The United States Public Health Service

Week Ending	Iowa	Missouri	Kansas	Oklahoma	Texas	California
April 2	0	0	0	0	0	5
10	1	0	0	0	1	5
17	0	2	0	0	1	5
24	0	1	0	1	3	5
May 1	0	0	1	0	5	7
8	1	2	2	4	13	20
15	0	0	0	0	2	11
22	0	0	2	0	4	13
29	0	0	1	0	6	9
June 5	0	0	1	0	6	33
12	0	0	0	0	10	27
19	0	1	1	1	29	47
26	0	2	1	0	24	19
July 3	0	1	3	23	80	57
10	1	0	5	44	90	75
17	2	4	7	39	102	90
24	0	4	7	42	96	111
31	0	8	30	30	105	104
August 7	1	7	43	52	62	111
14	5					
21	8					
Total	19	32	104	236	639	754

REPORTED OCCURRENCE IN IOWA

The following table, (Table II) indicates the total number of cases reported in Iowa during the past ten years:

TABLE II
POLIOMYELITIS IN IOWA—1933 TO 1942

Year	Cases
1933	45
1934	37
1935	65
1936	76
1937	241
1938	40
1939	197
1940	929
1941	41
1942	72

It will be noted in Table I that only three cases of poliomyelitis were reported in Iowa in July of this year, but that fourteen cases were reported for the first three weeks of August.

Attending physicians and local health officials are requested to report cases which may come under their observation, so that the records of the State Department of Health may be as accurate and complete as possible.

EPIDEMIOLOGY OF POLIOMYELITIS

The following paragraphs are quoted from an article by C. C. Dauer, M.D., Epidemiologist, District of Columbia Health Department. The article is entitled "Poliomyelitis in the United States in 1942, and a Summary of its Prevalence from 1933 to 1942, Inclusive" and was printed in Public Health Reports, June 18, 1943.

"The epidemiological and experimental studies which have been reported during the period covered by this series of reports (1933-42) have not produced any radical changes in our concept of poliomyelitis nor have they yielded information essential for practical control of the disease. However, these studies have suggested certain revisions in the prevailing opinions regarding the portal of entry of the virus and transmission of the disease in man. It seems rather remarkable that in spite of all the time and effort spent in studies on poliomyelitis during the past 20 years so little new information on the epidemiology of the disease has been produced. One can improve very little on Frost's discussion on the epidemiology of poliomyelitis published in Hygienic Laboratory Bulletin No. 90 in 1913, which except for a few minor revisions could be used to outline the prevailing views on the epidemiology of this disease.

"In 1933 it was still the opinion of many investigators that the olfactory tract was a common portal of entry of the virus in human poliomyelitis. Since then numerous examinations of olfactory bulbs from fatal human cases have failed except in a few instances to demonstrate the presence of virus in this organ or to show inflammatory reactions which are common in the experimental disease in monkeys infected intranasally.

"Although the presence of virus in the stools of

some human cases had been demonstrated many years previously, it was not until 1937 that the gastro-intestinal tract was seriously considered as a portal of entry by many investigators. The frequency and ease with which virus could be recovered in relatively large amounts from the stools of paralytic and abortive cases, convalescents, and contacts of the disease soon led many to consider the intestinal tract as the principal portal of entry.

"The pharyngeal mucosa is still regarded by many investigators as a common portal of entry, an opinion based in part on the fact that the virus may be recovered from the nasopharyngeal secretions in certain cases and contacts. The consensus of opinion regarding the portal of entry of virus in human poliomyelitis would appear to be somewhat as follows at the present time. Infection seldom occurs by way of the olfactory tract but mainly through mucous membrane of the pharyngeal or the lower gastro-intestinal tract, or both. The relative frequency of these sites as portals of entry is still a matter of dispute and should be considered a subject for further investigation.

"Little advance has been made in our knowledge of the manner in which infection is transmitted from person to person. The recovery of virus from sewage as well as from fresh stools suggested to some that poliomyelitis might be water-borne. The marked concentration of cases in the summer time has been suggested as favoring such a hypothesis. Maxcy recently summed up the evidence for and against the hypothesis that poliomyelitis may be water-borne, and his conclusion was that 'There is at present insufficient evidence to justify the belief that water is a medium which is of practical importance in spread.'

"The impression that the paralytic case or the occasionally recognized abortive case does not represent the extent of active infection in a family or other aggregations of persons living in close contact with each other has been strengthened by several studies in recent years. It appears that abortive or mild infections which do not result in paralysis are the rule rather than the exception in family and other groups, especially during epidemic periods. Langmuir's studies during a recent epidemic in New York State seem to verify this impression as have other studies of outbreaks in institutions.

"Neither experimental nor epidemiological investigations have produced any convincing evidence that poliomyelitis is transmitted by an insect vector or that reservoirs of infection are to be found in any lower animals. Armstrong's demonstration that the Lansing strain of virus when given intracerebrally to cotton rats could produce typical lesions in these animals and could further be adapted to white mice cannot be interpreted to suggest an animal reservoir.

"Laboratory studies on poliomyelitis have revealed the existence of several strains of poliomyelitis virus which show some immunological differences. Serum from some adults living in different parts of the world may neutralize a number of strains of the virus which would seem to indicate a fairly wide distribution of the various strains. Aycock suggests that more than one strain may circulate freely in a given outbreak.

"Although there have not been developed any practical measures for control of the spread of poliomyelitis or a method for protecting susceptible persons against infection, there has been introduced in the United States in the past few years a new form of therapy which is now generally referred to as the Kenny treatment. It promises much toward relieving many of the crippling effects of the disease."

PREVALENCE OF DISEASE

Disease	July '43	June '43	July '42	Most Cases Reported From
Diphtheria	3	9	1	Humboldt, Marion, Pottawattamie
Scarlet Fever	49	77	37	For the State
Typhoid Fever	1	2	8	Decatur
Smallpox	2	0	0	Black Hawk, Polk
Measles	254	424	226	Clinton, Des Moines, Dubuque, Johnson, Linn
Whooping Cough	243	183	145	Black Hawk, Delaware, Dubuque, Washington, Woodbury
Brucellosis	39	39	41	For the State
Chickenpox	31	148	46	Des Moines, Dubuque, Linn, Woodbury
German Measles	11	161	3	Johnson
Influenza	1	1	1	Boone
Meningitis (Meningococcus)	11	2	1	For the State
Mumps	101	159	128	For the State
Pneumonia	11	18	19	Polk
Poliomyelitis	3	0	6	Black Hawk, Clay, Palo Alto
Tuberculosis	41	73	147	For the State
Tularemia	0	0	0	None
Gonorrhea	141	163	130	For the State
Syphilis	228	256	256	For the State

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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SUBSCRIPTION $3.00 PER YEAR

Address all communications to the Editor of the Journal, 505 Bankers Trust Building, Des Moines 9

Office of Publication, Des Moines 9, Iowa

Vol. XXXIII SEPTEMBER, 1943 No. 9

WAGNER-MURRAY BILL*

The medical portion of the vast reconstruction program that our present administration is planning for the American people was presented to the Senate June 3, 1943, in the Wagner-Murray Bill. It is an almost incredible attempt to substitute state medicine for private practice. Hospital care is also provided in this bill, and dental and nursing care are eventually to be included. Lives of 110 million people are concerned. The sponsors of the Bill, *assuming* that from 10 to 12 per cent of the American people do not receive adequate medical and hospital care, would overthrow completely our present system of practice which has, since the founding of this democracy, given Americans the best medical care in the world.

Employees are to be taxed 6 per cent of their wages and employers another 6 per cent of the payroll. Every self-employed individual is taxed 7 per cent of the market value of his services, up to $3,000.00 per year, and government employees will pay 3.5 per cent of their salaries. It is estimated that this would produce a trust fund of twelve billion dollars per year, three billion of which is to be allocated to the Medical Care and Hospitalization Account. The Bill provides that every insured individual and every dependent entitled to benefits shall receive general medical, special medical, laboratory, and hospitalization benefits. Thirty days of care and treatment are guaranteed, but if this is not sufficient time additional days may be added at a reduced fee to the hospital.

The expenditure of this vast sum of money will be under the direction of the Surgeon General, who is also authorized and directed to:

1. Establish a national advisory medical board and hospital council consisting of the Surgeon General and sixteen members who are to be appointed by the Surgeon General. This council is without authority. *All authority* and *power* is invested in the Surgeon General.

2. To employ doctors and establish rates of pay.

3. To establish fee schedules for medical services.

4. To establish qualifications for specialists.

5. To determine the number of individuals for whom any physician may provide service (the English panel system), and arrange for part-time or full-time service for these physicians.

6. To distribute available patients among the available doctors on a prorata basis.

7. To publish the names of general practitioners who have agreed to furnish such service, and to designate the specialists.

8. To select hospitals or clinics which may provide service for patients and designate fees for such service.

9. Patients may select their own doctor, but only in accordance with *the rules* prescribed by the Surgeon General.

Thus the Surgeon General of the Public Health Service becomes the czar of American medicine and American hospitalization, sole director of a sum equal to the total annual federal expenditure during the 1920's, or approximately twice the total cost of the Japanese government in 1940.

Let us analyze for a moment how the government proposes to spend this enormous sum. Twenty per cent ($600,000,000) is to be paid to the physicians. For every dollar paid to the physicians for medical care one dollar will be spent for administrative cost (more bureaus, more politicians, more inspectors). Thus the patient must spend for bureaucratic administration a sum equal to that paid for medical care. For every dollar given the physician approximately $1.12 will be spent for non-government owned hospital beds, $1.50 for government owned hospital beds, and 30c for drugs and medicine.

Medical education also is to receive special attention; in fact our medical students today are in uniform and their expenses paid by the government as a wartime necessity. Is it not a logical step for medical students so educated to enter a system that offers short hours, certain salary, no competition? But what of the patient?

Crownhart, in his study of the English system in 1938, found that all too frequently the patient was exploited to prove some pet theory; that the panel physician could not render efficient service to his patients; and that scientific diagnostic work was not comparable to that rendered in this country. In fact, panel (government controlled) medicine at its best was not comparable to the American plan. There must be, of necessity, a vast ex-

*Prepared by R. D. Bernard, M.D., Clarion, by special request.

pansion of the Public Health Service. Increased numbers of medical students are to be trained in government owned and operated schools for this Service. Here again we see an entering wedge in the vast administration planned expansion. Under the provisions of this Bill the Surgeon General can authorize grants-in-aid to nonprofit institutions engaged in research, graduate or postgraduate education in the amount of 48 million dollars each year—twice the amount now necessary to operate all accredited colleges in the United States.

The American public is submitting to regulation of many phases of life by Washington bureaus because of war necessity. The typical American does not relish unnecessary regulation and today is protesting vigorously against bureaucratic control in the hands of uninformed individuals. As far as we know, no organization representing organized medicine has been consulted by the men who prepared the Wagner-Murray Bill, which may be a politician's dream but which is most certainly a horrible nightmare to the American physician. This same physician is an individualist, his practice is competitive, and as a rule the most efficient physician is the most successful. Our competitive system has developed the best medical care in the world, the most intensive scientific research —far superior to any which has been developed in countries with socialized medicine.

The medical profession of Iowa is looking today to the American Medical Association for plans and specifications to fight this Bill. They expect aggressive leadership, adequate representation in Washington, a close association with the dentists, nurses, and hospitals to DEFEAT the Bill. Iowa Congressmen, who oppose such legislation, are asking US what WE are doing. Up to the present time little has been done. This Bill could be defeated by the doctors in their own offices and communities if every doctor would thoroughly acquaint him or herself with the facts contained in the Bill, and the ANSWERS. His patients—the lawyer, the farmer, the editor, the laborer—should be enlightened on the panel system and its *inefficient* medical and hospital care; that the patient will have free choice of physician once only. After that, bureaucratic red tape—miles of it—usually prevents a change of physician. The physician and his patients can supply the support our Congressional Delegation desire—they will fight for us—but we in turn MUST assure them of our opposition to the Bill and give them the reasons why. The panel physician will be under constant political supervision, not competitive medical supervision. He will not work "round the clock" to save the life of a patient, but must of necessity maintain the working hours ordered by Washington. The loyal physicians who are in the service are doing a wonderful job. It is up to the men on the home front to preserve the American plan of medical service and hospital service.

American Medicine does not need a czar!

PROSTIGMINE THERAPY MAY BE BENEFICIAL IN POLIOMYELITIS

In the August 7 issue of *The Journal of the American Medical Association* Kabat and Knapp discuss their results in the treatment of twenty poliomyelitis patients with prostigmine. Used, for the most part, in conjunction with the Kenny hot foment method, the drug in the majority of instances seemed to accelerate recovery.

According to the authors, "Prostigmine decreases skeletal muscle hypertonus and proprioceptive reflex hyperirritability ('muscle spasm') in patients with poliomyelitis. It also reduces 'incoordination.'" These observed beneficial effects, it is postulated, may be the result of the inhibitory action of prostigmine on cholinesterase affecting synaptic function in the spinal cord. Synaptic function in transmitting orderly impulses to the anterior horn cells becomes disorganized in poliomyelitis as the result of inflammation about the internuncial neurons in the gray matter of the spinal cord.

The drug was given subcutaneously as prostigmine methylsulfate in doses of 0.5 milligrams for children two to six years of age up to 1.5 to 2 milligrams for adults, and orally as prostigmine bromide in doses of 15 milligrams two to five times a day for children up to 45 milligrams for adults. Atropine was given simultaneously to older children and adults in order to eliminate undesirable parasympathetic reactions.

Progress of the patients under prostigmine therapy was evaluated by measurements of range of passive motion. Seventeen of the patients had had the disease from two to six months when prostigmine treatment was begun, two were in the third to fourth week, and one was a chronic case of sixteen months' duration. A seventeen year old girl, six months after the onset of poliomyelitis, had a paralysis of her left arm with a flexion deformity of the hand so that the examiner was unable to straighten the fingers or extend the wrist. Within one hour after the injection this flexion deformity which had been present for six months completely disappeared. Another patient, a woman twenty-two years of age, had a residual paralysis of the left leg and weakness of the right leg persisting sixteen months after the onset of the disease. Before prostigmine she was unable, with knees straight, to reach closer than eight inches to the floor in the bent position because of con-

traction of the hamstring muscles, but an hour after the injection she was able to touch the floor with her knuckles. Similar stories of improvement were recorded for all the patients but two. In these no improvement was noted.

Undoubtedly this study by these two Minneapolis doctors will be widely read with a great deal of interest. Many may be somewhat mildly surprised, as we were, that therapy with hot foments which in the majority of instances was started within one day to one month after onset of the disease was not more effective in relieving the muscle spasm. Presumably this is a special group of cases for which an adequate explanation exists; but it logically brings up the question as to when in the course of the disease and in what type of cases one should resort to prostigmine therapy. Should hot foments be the treatment of choice for a certain period before prostigmine is exhibited and, if so, how long should this period be? Or if prostigmine is superior to hot foments in relieving muscle spasm, as it would appear to be from this article, should it be used from the onset of involvement? It is to be hoped that the authors will have more to say on this important matter in the near future.

SUGGESTIONS FOR LIMITING SPREAD OF INFANTILE PARALYSIS

The following suggestions for limiting the spread of infantile paralysis were contained in a letter written by Dr. Philip M. Stimson, widely known New York pediatrician, to the editor of *The Journal of the American Medical Association* and published in the July 10 issue of that publication. Because they appeal to us as summarizing very well our present day knowledge of the epidemiology of this disease, we are republishing Dr. Stimson's suggestions in our own columns:

"In view of the approaching season for possible poliomyelitis epidemics, it seems wise to summarize possible suggestions for limiting the spread of the disease. These suggestions are founded on present day knowledge, viz.:

"In the presence of the disease in a community:

"1. Avoid the use of any water that is possibly contaminated with sewage either for drinking, swimming or washing utensils. We know that sewage can carry the virus considerable distances and for an appreciable time.

"2. Avoid exhaustion from exertion or chilling. We know that overexertion and chilling during the incubation period tend to augment the oncoming disease.

"3. Avoid injury to the mucous membranes of the nose and throat, such as that resulting from a tonsil operation. We know that poliomyelitis exposures in the early post-tonsillectomy period are liable to result in severe—even fatal—infections, usually of the bulbar type.

"4. Treat every minor illness as a possible case of poliomyelitis, particularly if there is fever, headache and some spasm of the neck, spine and hamstrings. We know that very mild cases of poliomyelitis without recognizable paralysis are much more numerous than paralytic cases. Suspected patients should be kept quiet in bed for several days, and until passed as well by a competent examiner.

"5. Strive for proper sanitary conditions and, in particular, destroy flies and their breeding places. We know that flies can carry the causative virus of poliomyelitis, although it has not yet been proved that they can carry enough to infect human beings.

"6. Avoid unnecessary physical contacts with other people, wash hands carefully before eating, and don't put unclean objects in the mouth. We know that many healthy people carry the virus in their intestines and that for some cases, perhaps most, the port of entry of the infection is the mouth.

"7. Don't prescribe or take drugs or chemicals that are intended to protect against the disease. As yet we know of none that will do this."

SENATORS AND REPRESENTATIVES OF NATIONAL CONGRESS MEET WITH PROFESSIONAL AND OTHER GROUPS*

In Minneapolis on August 16, at the first meeting of its type so far reported, fifteen midwest Congressmen and one United States Senator conducted a public hearing for more than one thousand business and professional men at the Radisson Hotel. The purpose of the meeting was to acquaint the regional Congressmen with the current problems of the farmer, business, and professional man.

The conference was presided over by Representative August H. Andresen of Minnesota. Senator Shipstead of Minnesota, and Representatives of Minnesota, Wisconsin, Iowa, and North and South Dakota were in attendance. Iowa Congressmen included Paul Cunningham of Des Moines, Henry O. Talle of Decorah and J. W. Gwynne of Waterloo. Members of the Iowa State Medical Society present included President L. R. Woodward of Mason City, Secretary R. L. Parker of Des Moines, Dr. R. D. Bernard of Clarion, Dr. J. W. Billingsley of Newton, and Dr. A. L. Jenks of Des Moines.

The morning session was devoted to the prob-

*From the Legislative Committee.

lems of the farmer and allied industries. During the afternoon representatives of the various business groups discussed the mounting complexities with which business is faced in the present emergency. The medical and allied professions participated in the evening hearing.

Following discussions by the pharmaceutical and dental groups, Dr. A. W. Adson of Rochester, Minnesota, gave a most able presentation to the Congressmen and the five hundred people assembled. He stressed the fact that our present system of the private practice of medicine was responsible for our nation enjoying the best health of any in the world, and pointed out the danger of losing this enviable record by the growing threat of federal and political control. It was shown that the federalization of medicine, instead of lowering the cost of medical care, would result in actual increased expenditures because of the large sums necessary to administer such a program. Dr. Adson advised the maintenance of our system which allows for free choice of physician by the patient, assumes local responsibility for the care of our indigent, and fosters low-cost, nonprofit, public service insurance programs for medical and hospital care which are adapted to local needs. That organized medicine is not unaware of the problems of today was shown by the recent creation of the new council on medical care, a progressive step in the distribution of such service. He closed with a plea to the Congressmen to allow medicine to continue to progress, free from restrictive federalization and in accordance with the principles and ideals of our profession and true democracy.

Dr. Adson's talk was well received by those assembled, drawing applause on several occasions. Many of the Congressmen asked questions relative to pending proposed legislation, and these various points were discussed at length.

The general tone of the whole conference was that the people desired less centralization and federal governmental control, resenting government by decree and bureaucratic directives. Emphasis was placed on the maintenance of state rights, individual initiative, and free enterprise. The hearing afforded the people a direct method of getting their viewpoint to their elected legislators, and it is to be hoped that such meetings will be repeated in the future.

THE CURRENT TAX PAYMENT ACT OF 1943

As everyone knows, legislation was enacted in June to put federal income taxpayers on a "pay-as-you-go" basis starting July 1, 1943. The system is comparatively easy for employed persons, but it entails considerable bookkeeping for professional people whose income cannot be foretold. The JOURNAL has endeavored to prepare a simple explanation of the procedure as it affects physicians, and for the sake of convenience has made various subdivisions covering the different parts of the act as it applies to physicians. These will include the physician as an employer, the physician who is an employee, the physician who is in practice for himself, and the physician who is in military service.

About September 1, everyone will receive from the Collector of Internal Revenue material which may include the following:

1. Letter from Henry Morgenthau, Jr., to Federal Income Taxpayers. This is explanatory in nature.

2. Instructions for 1943 Declaration Form 1040-ES and Table for Estimating Tax on Incomes of not over $10,000.00. This form may be used by the majority of physicians whose incomes are less than $10,000.00. In the event of some unusual circumstance, this form may not be applicable, but for the great majority of persons, the income tax and victory tax figured according to this form will be practically the same as if figured on the complicated blank.

3. Alternative Instructions for Declaration of Estimated Income and Victory Tax by Individuals (4 pages). This form may be used for incomes exceeding $10,000.00 or for unusual circumstances. It is more complicated than the blank mentioned in Paragraph 2.

4. Form 1040-ES, Declaration of Estimated Income and Victory Tax by Individuals. This is to be filed with the Collector of Internal Revenue by September 15, 1943.

Physicians will find it helpful to consult their 1942 Federal Income Tax Report in filling out the 1943 report. The blank for 1943 will be substantially the same as the 1942 blank, and taxes may be figured on the same basis as was done on the 1942 blank. The JOURNAL also wishes to reiterate that careful study of the forms will clarify the procedure.

The return filed September 15 is not final; physicians may file another return December 15, and file the final income tax return for 1943 on or before March 15, 1944. At this time they pay any balance still due the Government, or, if they have overpaid, the Government will make an adjustment.

PHYSICIANS AS EMPLOYERS

Since July 1 physicians who are employers have been withholding the 20 per cent tax from the wages of their employees covered by the act. If the deductions are more than $100.00 a month, the physician has been depositing them in an au-

thorized depositary. If the deductions are less than $100.00 a month, the physician will file a report of such deductions within thirty days of the end of the quarter. He must furnish each employee with a statement of the deductions at the end of the year, or upon termination of employment.

PHYSICIANS WHO ARE EMPLOYEES

Physicians who are employed by someone else went on the current tax payment basis July 1. Their employer must furnish them with all statements to which employees are entitled, and ordinarily they need not concern themselves about the procedure. Some of them may be required to file an estimate September 15, however, if their incomes are more than $2,700.00 if single, or $3,500.00 if married; and they must file a final return March 15, 1944, the same as all other persons.

PHYSICIANS IN PRACTICE FOR THEMSELVES

The Journal recommends that this group of physicians refer to the February issue of the Journal of the Iowa State Medical Society and to their copy of their 1942 income tax report. The first step should be to determine the 1943 income up to September 1, and also the deductible business expenses up to that date. The same rules apply here as applied to the 1942 report. The physician must then estimate his income for the final four months of the year, less expenses of course. This estimate should be made carefully. If the estimate is more than 20 per cent less than the actual income, the physician is liable for a penalty. However, an amended return may be filed not later than December 15 if the physician finds that his income is going to exceed the estimate made September 1.

Having determined his net income (and here we mean his net income from his practice before personal deductions), the physician may then use the form mentioned in Paragraph 2, the simplified form for incomes of less than $10,000.00, unless his income exceeds that amount or he has unusual deductions. The computation of estimated income and victory tax on the back of this form is easily accomplished. The first line is for the total estimated income; the second for the personal exemption; the third gives the difference between the two and is the amount on which the income tax is figured. The table below the computation form provides this figure, which is placed on line four. Line five is for the amount of income on which victory tax is due; line six tells how to compute it. Line seven gives the total estimated income and victory tax.

The figure on line seven is carried to the front page of this blank and placed on line one, provided it is greater than the amount of tax paid in 1942. If it is less than the 1942 tax, then the 1942 tax figure should be used instead. Since most physicians have not withheld victory or income taxes from their own income, they cannot use line two, and line three will be the same as line one. On line four the first two payments of tax on 1942 income are listed; this amount is subtracted from the estimated tax to give the balance due on line five. Half of this figure must be paid when the declaration is filed.

Physicians with incomes of more than $10,000.00 will use the alternative instructions sheet to compute their estimated tax. Those with unusual exemptions may also use this sheet. When they have computed their estimated income tax and victory tax, they place this information on Form 1040-ES if the figure is higher than the 1942 income tax, and figure the balance of tax due just as if they had used the simple form.

PHYSICIANS IN MILITARY SERVICE

Physicians in military service are not exempt from filing declarations of estimated income, although there are three provisions under which payment of tax may be deferred until the term of service is ended. These will be found in the February Journal mentioned earlier in this article.

The new tax act makes nontaxable the first $1,500.00 of service pay of members of the armed forces. To this may be added the usual personal exemption and credit for dependents, so that the unmarried physician's exemption is $2,000.00, and the married physician's $2,700.00, plus $350.00 for each dependent.

The requirement that taxpayers must pay on the higher of the two incomes, 1942 or 1943, does not pertain to men in service. They are given special relief provisions and the Journal believes that information regarding their tax liability will be available to them at their post of duty.

Any tax liability owed by a member of the military or naval forces who dies in active service is canceled, the provision being retroactive to December 7, 1941. If the tax has already been assessed it will be abated, and if it has been collected it will be refunded as an overpayment. This provision applies only to income taxes and not to estate tax liability.

OTHER INFORMATION

For a more complete analysis of tax legislation, the Journal refers one to the following issues of *The Journal of the American Medical Association:* December 5, 1942, January 30, 1943, and August 14, 1943. It hopes that the information in this article will be helpful to the majority of Iowa

physicians, and that the physician whose tax status is not fully covered will understand the impossibility of explaining all contingencies. Help is obtainable from district Internal Revenue Offices and it is suggested that the physician with an unusual problem consult with these authorities.

SIX THOUSAND MORE PHYSICIANS FOR ARMED FORCES BY JANUARY 1

The facts concerning the need of the armed forces for 6,000 more physicians by January 1 were published in an editorial in the August 7 issue of *The Journal of the American Medical Association*. The JOURNAL OF THE IOWA STATE MEDICAL SOCIETY was requested to republish this editorial. The national journal says:

"At a conference of the Directing Board of the Procurement and Assignment Service for Physicians, Dentists and Veterinarians, held on July 31, with the War Participation Committee of the American Medical Association and in the presence of Mr. Paul V. McNutt, chairman of the War Manpower Commission, and representatives of the Army and Navy medical departments and the Public Health Service, it became apparent that the medical profession must produce toward the winning of the war an additional six thousand physicians for the armed forces before January 1, 1944. Pursuant to a realization of this objective a directive has gone to the generals in command of the various service commands authorizing them to induct into the service physicians between the ages of 38 and 45 who have been declared available by the Directing Board of the Procurement and Assignment Service for Physicians, Dentists and Veterinarians and who are otherwise subject to Selective Service.

"The needs of the armed forces are real. The members of the War Participation Committee raised with the representatives of the various governmental agencies all the questions that have from time to time challenged the need; the challenge seems to have been met effectively. Indeed, the intimation was made clear that the needs of the armed forces will be met by specific regulations of the Selective Service Administration or the enactment of necessary legislation if required. All physicians up to 45 years of age who have been indicated as available have therefore placed on them now the responsibility for an immediate decision as to their enlistment with the armed forces. The need is so positive that questions of essentiality of men in positions of teaching and research and in industrial medicine are likely to be rigidly reviewed in the near future with a view to extracting from civilian life every one that can be spared.

"As the war continues and intensifies new needs for the services of the medical profession become apparent. An army in motion and one engaged in the kind of aggressive combat that now concerns our armed forces needs physicians in even greater numbers than have heretofore been demanded. Many thousands of interned aliens and prisoners are now the burden of the United States and must be given medical care.

"If there is any physician who still hesitates under these circumstances, he should realize the added advantage to him of accepting now the commission that is proffered. Should it become necessary in the near future, as seems quite likely, to enlist new activity by the Selective Service Administration and the Officers' Procurement Service to bring in the six thousand physicians that are so certainly required, those recruited by that technic will inevitably begin their service with the minimum commission that is offered, namely that of first lieutenant. Until that technic is installed, the men of special competence and of years beyond those of the recent graduate have the assurance of careful consideration and a commission more nearly in accord with age and experience.

"The call here made has the approval of the Directing Board of the Procurement and Assignment Service and of the War Participation Committee of the American Medical Association. The medical profession may well be proud of the fact that it has been the only group given, by directive of the President, the responsibility of maintaining service in civilian life and at the same time supplying the needs of the armed forces. Let us not fail in meeting fully the trust that has been placed upon us."

RECENT AMENDMENTS TO FOOD RATIONING REGULATIONS

The following summary of recent amendments to food rationing orders, involving osteopaths, condensed milk, fats, oils, and hospitals, was carried in the July 17 issue of *The Journal of the American Medical Association:*

"The Office of Price Administration announced on July 2 that any medical practitioner authorized by the state in which he practices to prescribe all internal drugs is also authorized to certify that a person requires supplementary food rations for health reasons. Authority to make such certification was previously confined to doctors of medicine. OPA has now broadened the authority so that osteopaths in states which license osteopaths to prescribe all internal drugs may also prescribe supplementary food rations. Food rationing regulations provide that a person whose health requires more rationed food than his ration points permit him to buy may apply to his local board for necessary additional points. In some illnesses foods are prescribed in addition to drugs or medicines, or as a substitute for them. In some counties the work of ration boards in

processing such applications has been much simplified through the voluntary help of the doctors themselves. By establishing panels to review all medical certifications and to advise the boards, responsibility for issuing extra rations for health reasons has been kept on a professional level.

"The Office of Price Administration under date of June 1 placed evaporated and condensed milk on the list of rationed products. These types of milk are added to the group of rationed foods containing meats and fats, for which red ration stamps are needed, without any increase in the total number of points allowed for this group. One point is required for one 14½ ounce can or for two 6 ounce cans or for two 8 ounce cans. This means that the child may use 7 of his 16 points per week for his milk requirements in terms of evaporated milk, which allows slightly less than the equivalent of a quart of whole milk per day, and have 9 points remaining for his meat and fat requirements. An invalid or any other person whose health requires that he have more canned milk than he can obtain with the stamps in his War Ration Book II may apply at his local War Price and Rationing Board for additional points. The consumer must submit a written statement of a licensed physician showing why he must have more canned milk, the amount needed during the succeeding two months and why unrationed foods cannot be used instead. A supplemental allotment to acquire canned evaporated and condensed milk needed by a hospital to meet the dietary needs of its patients may be obtained on application to its local War Price and Rationing Board. It is understood that, if the present method of rationing does not make evaporated milk available in all areas for infants and children, some more effective method will be worked out.

"The Office of Price Administration has issued an amendment to ration order number 16 (R. O. 16, amendment 25) which permits the use of rationed fats and oils for external therapeutic purposes. This includes the use of vegetable oils, such as cottonseed oil, for bathing newborn infants, for external application in skin diseases, for urethral injection or lubrication of urethral instruments, and for x-ray visualization. Such use of rationed fats and oils is defined as 'industrial consumption' and persons using these products for such purposes are classified as 'industrial consumers.' An industrial consumer engaged in the care and treatment of the sick and needing rationed fats and oils for this purpose may apply to his district Office of Price Administration for a certificate with which to acquire them. The procedure to be followed, briefly, is as follows: The application should be made on form R-1605 to the district office. If the applicant is a hospital the district office will pass on the application by using the same method of computing allowances as the local boards use in computing allotments for industrial users; otherwise the application will be forwarded to the Washington office for action. If the applicant requires more than he would receive by the method of computation described, he should also submit form R-315 stating the reasons for such request. An 'industrial consumer' to whom a certificate is issued for 'industrial consumption' of rationed fats and oils may use it only to acquire the foods for which application was made and may use those foods only for the purpose for which the application was granted.

"For several months the Office of Price Administration and medical authorities have been studying the hospital problem with a view to developing a uniform procedure covering the granting of supplemental allotments for hospitals. Solution of the problem is believed near. In the meantime a provision in the regulations (section 11.6 of general ration order 5) should enable hospitals to obtain the necessary supplemental allotments so that patients need not suffer from dietary deficiency. This provision gives local boards authority to grant such allotments to meet the dietary requirements of patients living in and receiving care in hospitals whether or not such patients are on special diets. In determining the amount of the supplemental allotment of processed foods and the commodities covered by ration order 16, the local board will take into consideration the availability of fresh fruits and vegetables, unrationed substitutions such as poultry and fresh fish, and the physical facilities of hospitals to process and store such foods."

EMERGENCY MATERNITY AND INFANT CARE

Funds have been made available to provide for medical and hospital care for wives and infants of servicemen of certain grades.

Any woman in the state, irrespective of legal residence, whose husband at the time of application is in the armed forces, including men deceased or missing in action, of the United States (Army, Navy, Marines and Coast Guard) of the first, second, third, fourth, fifth, sixth, and seventh grades, will be eligible for the medical and hospital maternity services provided under the plan when these services are not otherwise available from facilities of the Army or Navy. Likewise, any infant under one year of age, of the above grades of enlisted men, will be eligible for medical, surgical, and hospital care for any illness.

The grades of servicemen listed above do not include commissioned officers.

Recently a more detailed description of this program, along with an application form, was mailed to each member from the office of the State Society. Should this material have not been received or was mislaid, copies may be requested from the Division of Maternal and Child Health, State Department of Health, Des Moines 19, Iowa. Additional applications forms may be obtained from the same address.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

Board of Trustees Meeting
July 25, 1943

The Board of Trustees of the Iowa State Medical Society met in the central office Sunday morning, July 25, 1943, with the following persons present: Trustees Oliver J. Fay, John I. Marker, and Walter A. Sternberg; Secretary Robert L. Parker; and Editor Lee F. Hill.

The meeting was called to order at 9:15 a. m.; minutes were read and approved; bills were authorized; the editor and associate editor were reappointed for another year; the National Physicians Committee was discussed and the president was asked to write a letter to the secretary about promised cooperation with the State Society; and Journal matters were discussed and decisions made on advertising policy.

The meeting adjourned at 11:30 a. m.

The Physician and Medical Care*

ALFRED W. ADSON, M.D., Rochester, Minnesota

We doctors from the states of Wisconsin, Iowa, North and South Dakota and Minnesota appreciate this opportunity to talk with you, our Senators and Representatives at the national capitol, since we live in the communities you represent and share with our neighbors the same responsibilities, vicissitudes, and enjoyments that you share with them. The war must be won; our sons and daughters are on the battlefronts, we accept heavy taxation, we buy bonds, we make sacrifices, we work long hours and endure sleepless nights, with the hope that our efforts will preserve the original ideals of Americanism. We are conscious of the fact that emergency regulations become necessary in order to concentrate our productive forces in behalf of the war effort. But we hope that the emergency measures which have taken over so many of our daily activities, through directives from bureaus in Washington, will not be allowed to continue when the emergency ceases. We cherish the privilege of individual initiative, as do our neighbors, the farmers, the laborers, the merchants, the industrialists, and colleagues in other professions. Economy must be practiced, state rights must be preserved, if we are to pass on the heritage to our sons and daughters that once was passed on to us by our fathers who fought to maintain a true democracy.

We physicians and surgeons are servants of the public. We accept the responsibility of preserving the health of our communities, and we are accustomed to render relief to those who are sick, irrespective of color, creed, nationality, or economic status, and regardless of the time of day such demands are made. In this present emergency, our first responsibility is to supply physicians for the armed forces in order that our sons and daughters will have medical aid when the emergency arises, for there is nothing too good for those who are making the supreme sacrifice to maintain a free country. We, likewise, have a responsibility in supporting the Veterans Administration in order to supply the additional medical personnel and hospital facilities for the injured soldier when he returns for reconstruction and rehabilitation. The civilian at home, who maintains our economy, supplies the food, clothing and material of war, must be kept physically fit and, therefore, he is entitled to the best that medical science has to offer. During the emergency, luxury medical attention will have to be curtailed in order to make it possible for the physician to meet the more urgent demands of those who are in need of medical service.

The physicians of the United States, through their national medical organization, working in conjunction with representatives of the armed forces and the War Manpower Commission, have helped to establish the Procurement and Assignment Service. This service has accumulated data on the qualifications of every physician, determined the need for his services in the community, and whether or not he is available for the army, navy, or public health service. This information is transmitted to the surgeons general of the respective services, in order that medical personnel can be procured on a voluntary basis and be assigned to services for which they are best fitted. We older physicians who have been declared essential to our communities, and those of us who have not been able to meet the physical qualifications of the armed forces, will take care of the patients of our colleagues during the emergency. We hope that the military demands for physicians will not be in excess of those that can be utilized. We are extremely desirous that those physcians who have entered the medical corps of our armed forces eventually will return to their respective communities and patients. Since their practice with the armed forces will differ considerably from that of civilian practice, it is our hope that our government will provide graduate training following hostilities in order to prepare these men to render efficient and better medical service to their patients on their return.

The accelerated programs of medical education are necessary during an emergency, but it is hoped that the programs of medical education will be reestablished at the close of the war in order that adequate time may be given to a full program of education and medical research.

As injured veterans return from army and navy hospitals, greater demands will be made on our veteran facilities. This will require additional hospital beds and personnel. Since these men and women have been transferred from the usual civilian's life to that of a disabled veteran's life, two results may occur. The one, voluntary hospitals will be confronted with bed vacancies and operating losses; the other result is the danger of building veterans hospitals in excess of needs. We, as physicians, would like to see the Veterans Administration procure army hos-

*Presented at a hearing before Senators and Congressmen from Wisconsin, Iowa, North and South Dakota and Minnesota in Minneapolis, August 16, 1943.

pitals that are no longer needed following the cessation of hostilities. Furthermore, it undoubtedly is possible, in some instances, to transfer patients from veterans hospitals to civilian hospitals, for example, tuberculous patients from veterans hospitals to civilian tuberculosis hospitals, thus making additional beds available for returning soldiers. This transfer would permit tuberculous veterans to be treated by competent physicians in locations close to their relatives and friends. Likewise, it is possible to transfer patients who are suitable for domiciliary care from veterans hospitals to homes provided with care for the invalid, again making available additional beds. Such changes would help the nation to economize, without lowering the standard of medical service which we are anxious to see maintained for our returning veterans, whether they be hospitalized in a veterans facility or under the care of the physicians of the community.

In conducting the medical service for our civilian population, we physicians find that we are confronted with three groups of persons: (1) those who are in a position to engage, for a fee, the service desired, (2) those with lower incomes who are able to procure the average medical services, but who do not have reserves for extended illnesses requiring long periods of hospitalization, and (3) the group of less fortunate ones who must depend on friends and communities for their medical service and hospitalization. In the third group, there are those who have no funds and depend on relief agencies for all their wants of life.

In order to speed the recovery of the patient, one factor is extremely important; namely, the patient-physician relationship. The patient must have confidence in his physician, and, therefore, he is entitled to the free choice of his physician. This is just as important for the patient of poor economic status as it is for the one who is situated in a more favorable position.

We physicians are conscious of the problems that confront those with low incomes. A prolonged illness becomes an excessive burden, and all of us physicians, on repeated occasions, have given our services graciously. However, we think it wise that many individuals who earn good incomes should be encouraged to budget their medical expenses along with their other expenses. We also would encourage those same individuals to take advantage of the hospitalization programs and to procure their own disability insurance. In some instances, physicians have banded themselves together, in order to offer a prepayment medical service. However, since the requirements of various groups within a community differ, prepayment medical service plans have not been universally successful. Although several plans are in operation and their proponents are struggling with their problems, it appears that a voluntary arrangement will render a more satisfactory medical service than one established by Federal agencies and controlled by political bureaus.

Medical service rendered to the injured workman by state industrial commissions has been reasonably well conducted, for which they should be commended. However, it is our duty, as physicians, to see that the injured workman receives the most efficient type of medical service, for the sooner an injured workman is returned to his occupation, the less likely it is that he may become a chronic invalid and a charge to the community.

Patients requiring relief should be given medical care along with the other necessities of life, the responsibility of which may belong to the county alone, or the state and county, or, in certain instances, to the nation, state and county. The medical service to those patients can be more efficiently rendered when administered by local relief agencies, which can become familiar with the circumstances surrounding each patient. Local physicians appointed as an advisory committee to the relief agency increase the efficiency of this program, since in most instances one or more of the physicians are acquainted with the patient seeking medical aid.

The temporary assignment of physicians from the United States Public Health Service to communities deprived of physicians or to communities where there has been a sudden influx of war workers, as an emergency measure, is commendable, but it would be unwise to establish permanent arrangements of this nature, since it would deprive physicians returning from military service of their former location and of the opportunity of seeking new locations.

We, as physicians, are confused by the many directives issued by the various bureaus in our national capitol. We, likewise, are at a loss to understand why legislation initiated relative to medical measures is referred to a variety of committees. It would appear to us that medical service rendered to the civilian population as a whole would be more effectively accomplished if it could be centralized in one department. The health of the nation embraces so many activities and allied professions that it would appear to us that it would justify the legislative and administrative branches of our government to create a Department of Health, headed by a cabinet officer, a Secretary of Health. We would like to suggest, further, that the legislative branch of our government create

(Continued on page 451)

Roster of Iowa Physicians in Military Service

As of August 25, 1943

Adair County

Cornell, D. D., Greenfield (APO 41, San Francisco, Cal.) ..... Capt., A.U.S.
Gantz, A. J., Greenfield (APO Los Angeles, Cal.) .. Capt., A.U.S.

Adams County

Willett, W. J., Carbon (Camp Maxey, Tex.) ..... Capt., A.U.S.

Allamakee County

Hogan, P. W., Waukon
Ivens, M. H., Waukon (Camp Shelby, La.)
Kiesau, M. F., Postville (Jefferson Barracks, Mo.) .. Major, A.U.S.
Rominger, C. R., Waukon (Camp Claiborne, La.) ..... A.U.S.

Appanoose County

Condon, F. J., Centerville (Owensboro, Ky.) .. Major, U.S.P.H.S.
Edwards, R. R., Centerville (Trenton, N. J.) ..... 1st Lt., A.U.S.
Huston, M. D., Centerville (Kansas City, Mo.) ..... Capt., A.U.S.

Audubon County

Koehne, F. D., Audubon (Oroville, Wash.) ..... Major, A.U.S.

Benton County

Koontz, L. W., Vinton (APO 726, Seattle, Wash.) .. Capt., A.U.S.
Senfeld, Sidney, Belle Plaine

Black Hawk County

Bickley, D. W., Waterloo (Camp Howze, Texas) .... 1st Lt., A.U.S.
Bickley, J. W., Waterloo (Fort Sill. Okla.) ..... 1st Lt., A.U.S.
Butts, J. H., Waterloo (Galveston, Texas) ... Lt. Comdr., U.S.N.R.
Cooper, C. N., Waterloo (Seattle, Wash.) ... Lt. Comdr., U.S.N.R.
Ellyson, C. D., Waterloo (Beaufort, S. C.) ..... Lt., U.S.N.R.
Eriesson, M. G., Cedar Falls (Carlisle Barracks, Penn.) ..... Capt., A.U.S.
Hartman, H. J., Waterloo (APO 33, San Francisco) Cal.) ..... Capt., A.U.S.
Henderson, L. J., Cedar Falls (Camp Roberts, Cal.) . Capt., A.U.S.
Hoyt, C. N., Cedar Falls (McClellan Field, Ala.) . 1st Lt., A.U.S.
Ludwick, A. L., Waterloo (APO 813, New York, N. Y.) ..... Capt., A.U.S.
Marquis, F. M., Waterloo (APO 180, Los Angeles, Cal.) ..... Capt., A.U.S.
O'Keefe, P. T., Waterloo (Nashville, Tenn.) ..... Capt., A.U.S.
Paige, R. T., LaPorte City (Des Moines, Ia.) . Lt. Comdr., U.S.N.R.
Rohlf, E. L., Jr., Waterloo (APO New York, N. Y.) ..... 1st. Lt., A.U.S.
Seibert, C. W., Waterloo (Colorado Springs, Colo.) .. Capt. A.U.S.
Smith, E. E., Waterloo (Scott Field, Ill.) ..... Major, A.U.S.
Smith, R. I., Waterloo (Reno, Nevada) ..... Capt., A.U.S.
Smith, R. G., Cedar Falls (APO 512, New York, N. Y.) ..... Major, A.U.S.
Trunnell, T. L., Waterloo (care P.M., New York, N. Y.) ..... Lt., U.S.N.R.

Boone County

Brewster. E. S., Boone (Camp Chaffee, Ark.) .... Major, A.U.S.
Healy, M. J., Boone
Shane, R. S., Pilot Mound (Des Moines, Ia.) Lt. Col., A.U.S.

Bremer County

Amlie, P. J., Tripoli (Fort Knox, Ky.)
Blum, O. S., Waverly (Fleet PO, New York, N. Y.) .. Lt., U.S.N.R.
Rathe, H. W., Waverly (Swannanoa, N. C.) ..... Capt., A.U.S.
Shaw, R. E., Waverly (Long Beach, Cal.) ..... 1st Lt., A.U.S.

Buchanan County

Barton, J. C., Independence (St. Paul, Minn.) ... Lt. Col., A.U.S.
Hersey, N. L., Independence (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Leehey, P. J., Independence (APO 957, San Francisco, Cal.) ..... Capt., A.U.S.
Loeck, J. F., Aurora (Camp Rucker, Ala.) ..... Capt., A.U.S.

Buena Vista County

Almquist, R. E., Albert City (Camp Shelby, Miss.) . Capt., A.U.S.
Brecher, P. W., Storm Lake (Camp White, Ore.) . Lt. Col., A.U.S.
Mailliard, R. E., Storm Lake (Camp Bowie, Tex.) . Lt. Col., A.U.S.
Shope, C. D., Storm Lake (Fort Des Moines, Ia.) 1st Lt., A.U.S.
Witte, H. J., Marathon (Omaha, Neb.) ..... Major, A.U.S.

Butler County

Anderson, B. V., Greene (Fleet PO, Seattle, Wash.) .... U.S.N.R.
James, R. A., Allison (Mare Island, Cal.)
Rolfs, F. O., Parkersburg (Springfield, Mo.)

Calhoun County

Grinley, A. V., Rockwell City (APO 507, New York, N. Y.) ..... Capt., A.U.S.
Hobart, F. W., Lake City (Camp Grant, Ill.) .... Capt., A.U.S.
Peek, L. H., Lake City (Jefferson Barracks, Mo.) .. Capt., A.U.S.
Stevenson, W. W., Rockwell City (Port Hueneme Cal.) ..... Lt. Comdr., U.S.N.R.
Weyer, J. J., Lohrville (Camp Carson, Colo.) .... 1st Lt., A.U.S.

Carroll County

Anneberg, A. R., Carroll (Camp Barkeley, Texas)
Anneberg, W. A., Carroll
Cochran, J. L., Carroll (Gulfport, Miss.)
Cross. D. L., Coon Rapids ..... Lt., U.S.N.R.
Freedland, Maurice, Coon Rapids
Morrison, J. R., Carroll (Camp Maxey, Texas) ..... Capt., A.U.S.
Morrison, R. B., Carroll (APO 634, New York, N. Y.) Capt., A.U.S.
Pascoe, P. L., Carroll (Bowman Field, Ky.) ..... Capt., A.U.S.
Scannell, R. C., Carroll (APO, New York, N. Y.)
Tindall, R. N., Coon Rapids (APO 944, Seattle, Wash.) ..... Major, A.U.S
Wyatt, M. R., Manning (Desert Center, Cal.) .... 1st Lt., A.U.S.

Cass County

Egbert, D. S., Atlantic (Fort Snelling, Minn.) Major, A.U.S.
Longstreth, C. M., Atlantic (Norman, Okla) . Lt. Comdr., U.S.N.R.
Needles, R. M., Atlantic (Davis, Cal.) ..... Capt., A.U.S.
Petersen, M. T., Atlantic (Topeka, Kan.) ..... Capt., A.U.S.

Cedar County

Laughlin, R. M., Tipton (San Diego, Cal.) ..... Lt., U.S.N.R.
Mosher. M. L., West Branch (Camp Gruber, Okla.) ..... Capt., A.U.S.
O'Neal, H. E., Tipton (APO 254, Los Angeles, Cal.) ..... Lt. Col., A.U.S.

Cerro Gordo County

Adams, C. O., Mason City (Brigham City, Utah) ... Capt., A.U.S.
Egloff. W. C., Mason City (Mesa, Ariz.)
Flickinger, R. R., Mason City (Carlisle Barracks, Penn.) ..... 1st. Lt., A.U.S.
Hale, A. E., Dougherty (Camp Hale, Colo.)
Harris. R. H., Mason City (Columbus, Ohio)
Harrison, G. E., Mason City (Boston, Mass.) ..... Col., A.U.S.
Houlahan, J. E., Mason City (Sacramento, Cal.)
Lannon, J. W., Clear Lake (APO 758, New York, N. Y.) ..... Capt., A.U.S.
Long, D. L., Mason City (Santa Ana, Cal.)
Marinos, H. G., Mason City (APO 25, San Francisco, Cal.) ..... Capt., A.U.S.
Sternhill, Irving, Mason City (APO New York, N. Y.)

Cherokee County

Bullock, G. D., Washta (Camp Livingston, La.) .... Capt., A.U.S.
Ihle, C. W., Jr., Cleghorn (Camp San Luis Obispo, Cal.) ..... Major, A.U.S.
Noble, R. P., Cherokee (APO 634, New York, N. Y.) . Capt., A.U.S.
Swift, C. H., Jr., Marcus (Fort Bliss, Texas) .... Capt., A.U.S.

Chickasaw County

Caulfield, J. D., New Hampton (Denver, Colo.) .... Capt., A.U.S.
Murphey, A. L., Fredericksburg (APO 3470, San Francisco, Cal.) ..... Capt., A.U.S.
O'Connor, E. C., New Hampton (Camp Crowder, Mo.) ..... Capt., A.U.S.
Richmond, P. C., New Hampton (Camp Gruber, Okla.) ..... Capt. A.U.S.

Clay County

Adams, G. W., Royal (Fort Clayton, Panama Canal Zone)
Edington, F. D., Spencer (Lowry Field, Colo.) ..... Col., A.U.S.
Jones, C. C., Spencer (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
King, D. H., Spencer (Spokane, Wash.) ..... Capt., A.U.S.

Clayton County

Anderson, H. M., Strawberry Point (Camp Crowder, Mo.) ..... 1st Lt., A.U.S.
Rhomberg, E. B., Guttenberg (Camp Wallace, Texas) . Capt., A.U.S.

Clinton County

Amesbury, H. A., Clinton (Vancouver, Wash.)
Burke, J. C., Clinton (Great Bend, Kan.) ..... A.U.S.
Ellison, G. M., Clinton (Shreveport, La.) ..... Capt., A.U.S.
Hill, D. E., Clinton
King, R. C., Clinton (Camp Chaffee, Ark.)
Lenaghan, R. T., Clinton (Fleet PO, San Francisco, Cal.) ..... U.S.N.R.
Meyer, A. K., Clinton (Denver, Colo.)
Norment, J. E., Clinton (Mare Island, Cal.)
Riedesel, E. V., Wheatland (Fort Douglas, Utah)
Snyder. D. C., De Witt
Van Epps, E. F., Clinton (Palm Springs, Cal.) ..... Capt., A.U.S.
Waggoner, C. V., Clinton (Seattle, Wash.) .. Lt. Cmdr., U.S.N.R.

Crawford County

Fee, C. H., Denison (Dunnellon, Fla.) ..... Capt., A.U.S.
Grau, A. H., Denison ..... Lt. Comdr., U.S.N.R.
Maire, E. J., Vail (San Francisco, Cal.)
Wetrich, M. F., Manilla (San Antonio, Tex.)

Dallas-Guthrie Counties

Byrnes, A. W., Guthrie Center (Fort Custer, Mich.) . Major. A.U.S.
Fail, C. S., Adel (Pacific Beach. Wash.) ..... Lt., U.S.N.R.
Margolin, J. M., Perry (Camp Cooke, Cal.) ..... Capt., A.U.S.
McGilvra. R. I., Guthrie Center (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Mullmann, A. J., Adel (Washington, D. C.) ..... Capt., A.U.S.
Nicoll, C. A., Panora (Camp Chaffee, Ark.) ..... Capt., A.U.S.
Osborn, C. R., Dexter (San Francisco, Cal.) ..... Lt., U.S.N.R.
Todd, D. W., Guthrie Center (Camp McCoy, Wis.) ..... 1st Lt., A.U.S.
Wilke, F. A., Woodward (APO 627, New York, N. Y.) ..... 1st Lt., A.U.S.

Davis County

Fenton, C. D., Bloomfield (Carlisle Barracks, Pa.)..Capt., A.U.S.

Decatur County

Doss, W. N., Leon (APO 924, San Francisco, Cal.)
Gamet, E. E., Lamoni (Tacoma, Wash.)

Delaware County

Baumgarten, Oscar, Earlville (APO 307, Los Angeles, Cal.).A.U.S.
Clark, R. E., Manchester (Fort Riley, Kan.)....1st Lt., A.U.S.

Des Moines County

Eigenfeld, M. L., Burlington (Camp Bowie, Texas) .....1st Lt., A.U.S.
Heitzman, P. O., Burlington (Fort Baker, Cal.)....Capt., A.U.S.
Jenkins. G. D., Burlington (West Point, N. Y.)....Lt. Col. A.U.S.
Lohmann, C. J., Burlington (Fort Lewis, Wash.)..Major, A.U.S.
McKitterick, J. C., Burlington (Davisville, R. I.) .....Lt. Comdr., U.S.N.R.
Moerke, R. F., Burlington (Abilene, Texas).....1st Lt., A.U.S.
Sage, E. C., Burlington.....Lt. Comdr., U.S.N.R.

Dickinson County

Buchanan, J. J., Milford (Fleet PO, New York, N. Y.) .....Lt. Comdr., U.S.N.R.
Henning, G. G., Milford (Camp Adair, Ore.).....Major, A.U.S.
Nicholson, C. G., Spirit Lake (Sawtelle, Cal.).....Capt., A.U.S.
Rodawig, D. F., Spirit Lake (Fort Hancock, N. J.) .....Capt., A.U.S.

Dubuque County

Beddoes, M. G., Cascade (Kansas City, Mo.)....Capt., A.U.S.
Conzett, D. C., Dubuque (Fort Riley, Kan.).....Lt. Col., A.U.S.
Cunningham, J. C., Dubuque (Meridian, Miss.) Capt., A.U.S.
Edstrom, Henry, Dubuque (Clinton, Iowa).....Major, A.U.S.
Entringer, A. J., Dubuque (APO 41, San Francisco, Cal.) .....Capt., A.U.S.
Hall, C. B., Dubuque (San Antonio, Texas).....1st Lt., A.U.S.
Knoll, A. H., Dubuque (San Francisco, Cal.)....Major, A.U.S.
Langford, W. R., Epworth (APO 948, Seattle, Wash.) .....Capt., A.U.S.
Lavery, H. B., Dubuque (Washington, D. C.)....Lt. Col., A.U.S.
Leik, D. W., Dubuque (Douglas, Ariz.).....1st Lt., A.U.S.
Mueller, J. J., Dubuque (Hattiesburg, Miss.)....1st Lt., A.U.S.
Olson, P. F., Dubuque (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.
Painter, R. C., Dubuque (care PM, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Paulus, J. W., Dubuque (Camp Merced, Cal.)....1st Lt., A.U.S.
Plankers, A. G., Dubuque (APO New York, N. Y.) Major, A.U.S.
Quinn, F. P., Dubuque (Carlisle Barracks, Penn.).Major, A.U.S.
Scharle, Theodore, Dubuque (Fort Lawton, Wash.) Capt., A.U.S.
Schueller, C. J., Dubuque (APO 758, New York, N. Y.) .....1st Lt., A.U.S.
Sharpe, D. C., Dubuque (Fort Leonard Wood, Mo.)..Major, A.U.S.
Smith, C. W., Dubuque (Fleet PO, San Francisco, Cal. .....Lt., U.S.N.R.
Steffens, L. F., Dubuque (Camp Chaffee, Ark.)..Lt. Col., A.U.S.
Straub, J. J., Dubuque (care PM, San Francisco, Cal.) .....Lt., U.S.N.R.
Ward, D. F., Dubuque (Rochester, Minn.)...Lt. Comdr., U.S.N.R.

Emmet County

Clark, J. P., Estherville (Fort Sam Houston, Texas) .....Capt., A.U.S.
Miller, O. H., Estherville (Gowen Field, Idaho) .....Lt. Comdr., U.S.N.R.

Fayette County

Camp, D. E., West Union (Camp Blanding, Fla.)...Capt., A.U.S.
Gallagher, J. P., Oelwein (Pensacola, Fla.).....Lt., U.S.N.R.
Henderson, W. B., Oelwein (St. Louis, Mo.).....Major, A.U.S.
Hess, A. M., West Union (Albuquerque, N. Mex.)..1st Lt., A.U.S.
Moen, H. P., West Union (Camp Barkeley, Texas)..Capt., A.U.S
Sulzbach, J. F., Oelwein

Floyd County

Baltzell, W. C., Charles City (Camp McCoy, Wis.)..Major, A.U.S.
Flater, N. C., Floyd (APO Los Angeles, Cal.)....Capt., A.U.S.
Knight, R. A., Rockford (San Diego, Cal.).....Lt., U.S.N.R.
Mackie, D. G., Charles City (Topeka, Kan.)....1st Lt., A.U.S.
Miner, J. B., Jr., Charles City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Tolliver, H. A., Charles City (San Pedro, Cal.)....Capt., A.U.S.

Franklin County

Byers, W. L., Sheffield (Jefferson Barracks, Mo.).1st Lt., A.U.S.
Hedgecock, L. E., Hampton (care PM, San Francisco, Cal.) .....Lt., U.S.N.R.
Randall, W. L., Hampton (San Diego, Cal.).....Lt., U.S.N.R.
Walton, S. G., Hampton (Camp Robinson, Ark.) 1st Lt., A.U.S.

Fremont County

Kerr, W. H., Hamburg (Camp Phillips, Kan.)....Capt., A.U.S.
Marrs, W. D., Tabor (APO 846, New York, N. Y.) .....1st Lt., A.U.S.
Wanamaker, A. R., Hamburg (Los Angeles, Cal.)..Capt., A.U.S.

Greene County

Cartwright, F. P., Grand Junction (Casper, Wyo.) Capt., A.U.S.
Castles, W. A., Jr., Rippey (APO San Francisco, Cal.) .....Capt. A.U.S.
Hanson, L. C., Jefferson (Camp Rucker, Ala.)...1st Lt., A.U.S.
Jongewaard, A. J., Jefferson (St. Louis, Mo.).....U.S.N.R.
Limberg, J. I., Jr., Jefferson (APO San Francisco, Cal.) .....Capt., A.U.S.
Lohr, P. E., Churdan (San Diego, Cal.).....A.U.S.

Grundy County

Rose, J. E., Grundy Center (Norman, Okla.) Lt. Comdr., U.S.N.R.

Hamilton County

Buxton, O. C., Webster City (March Field, Cal.)..1st Lt., A.U.S.
Howar, B. F., Jewell (APO 514, New York, N. Y.) Major, A.U.S.
James, D. W., Kamrar (APO 700, New York, N. Y.) .....Capt., A.U.S.
Lewis, W. B., Webster City (APO 763, New York, N. Y.) .....Capt., A.U.S.
Mooney, F. P. Jewell (APO New York, N. Y.)
Paschal, G. A., Williams (Camp Barkeley, Texas)..Capt., A.U.S.
Patterson, R. A., Webster City (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Ptacek, J. L., Webster City (Sheppard Field, Texas)
Thompson, E. D., Webster City (Biloxi, Miss.)..Capt., A.U.S.

Hancock-Winnebago Counties

Dolmage, G. H., Buffalo Center (Nashville, Tenn.)..Capt., A.U.S.
Dulmes, A. H., Klemme (Brigham City, Utah).....Capt., A.U.S.
Eller, L. W., Kanawha (APO 302, New York, N. Y.) .....1st. Lt., A.U.S
Shaw, D. F., Britt (Tucson, Ariz.).....A.U.S.
Thomas, C. W., Forest City (Camp Crowder, Mo.)..Capt., A.U.S.

Hardin County

Houlihan, F. W., Ackley (APO 860, New York, N. Y.) .....1st. Lt., A.U.S.
Jansonius, J. W., Eldora (Fort Rosecrans, Cal.)....Capt., A.U.S.
Johnson, R. J., Iowa Falls (Fort Bliss, Texas)..Capt., A.U.S.
Johnson, W. A., Alden (Pendleton, Ore.)
Shurts, J. J., Eldora (Camp Roberts, Cal.).....1st Lt., A.U.S.
Todd, V. S., Eldora (APO 545, Los Angeles, Cal.)...Capt., A.U.S.

Harrison County

Bergstrom, A. C., Missouri Valley (Ft. Benning, Ga.)....A.U.S.
Burbridge, G. E., Logan (Ft. Benning, Ga.).....Major, A.U.S.
Byrnes, C. W., Dunlap (Jefferson Barracks, Mo.)
Heise, C. A., Jr., Missouri Valley
Tamisiea, F. X., Missouri Valley (Jefferson Barracks, Mo.) .....1st Lt., A.U.S.

Henry County

Brown, W. B., Mount Pleasant (APO 4611, New York, N. Y.) .....Major, A.U.S.
Cogan, Samuel, Mt. Pleasant.....A.U.S.
Dwankowski, Carl, Mt. Pleasant (Carlisle Barracks, Pa.) .....1st. Lt., A.U.S.
Gloeckler, B. B., Mount Pleasant (Laurel, Md.).....Capt., A.U.S.
Hartley, B. D., Mount Pleasant (Yuma, Ariz.)....Capt., A.U.S.
Megorden, W. H., Mount Pleasant (Ogden, Utah) 1st Lt., A.U.S.
Ristine, L. P., Mount Pleasant (Sioux Falls, S. Dak.) .....Major, A.U.S.

Howard County

Buresh, Abner, Lime Springs (San Diego, Cal.)
Nierling, P. A., Cresco (Camp Polk, La.).....Capt., A.U.S.

Humboldt County

Arent, A. S., Humboldt (Stockton, Cal.).....Capt., A.U.S.
Coddington, J. H., Humboldt (Fresno, Cal.).....1st Lt., A.U.S.

Ida County

Dressler, J. B., Ida Grove (Texarkana, Tex.).....Capt., A.U.S.
Harris, H. H., Battle Creek (Omaha, Neb.)....1st Lt., A.U.S.
Martin, J. W., Holstein (Montgomery, Ala.).....Capt., A.U.S.

Iowa County

McDaniel, J. D., Marengo (Fort Clark, Texas).....A.U.S.
Miller, D. F., Williamsburg (Seattle, Wash.).....Lt., U.S.N.R.

Jackson County

Swift, F. J., Jr., Maquoketa (Camp Atterbury, Ind.) Major, A.U.S.

Jasper County

Doake, Clarke, Newton.....1st Lt., A.U.S.
Minkel, R. M., Newton (APO New York, N. Y.) 1st Lt., A.U.S.
Ritchey, S. J., Newton.....Major, A.U.S.

Jefferson County

Castell, J. W., Fairfield (Fort Devens, Mass.).....Capt., A.U.S.
Gittler, Ludwig, Fairfield (APO 1001, New York, N. Y.) .....Major, A.U.S.
Graber H. E., Fairfield (Carlisle Barracks, Penn.) Major, A.U.S.
Taylor, I. C., Fairfield (Washington, D. C.)....1st Lt., A.U.S.

Johnson County

Agnew, J. W., Iowa City (Camp Phillips, Kan.)..1st Lt., A.U.S.
Allen, J. H., Iowa City (Scott Field, Ill.).....Capt., A.U.S.
Boiler, W. F., Iowa City (Fort Leonard Wood, Mo.) .....Major, A.U.S.
Boyd, E. J., Iowa City (Colorado Springs, Colo.).1st Lt., A.U.S.
Brinkhous, K. M., Iowa City (Fort Houston, Texas) Lt. Col., A.U.S.
Callahan, G. D., Iowa City (El Toro, Cal.).....Lt., U.S.N.R.
Cooper, W. K., Iowa City (Jefferson Barracks, Mo.) Capt., A.U.S.
Crowell, E. A., Iowa City (Spokane, Wash.)..1st Lt., A.U.S.
Diddle, A. W., Iowa City (Key West, Fla.)..Lt. (jg), U.S.N.R.
Dorner, R. A., Iowa City (APO 534, New York, N. Y.) .....Capt., A.U.S.
Elmquist, H. S., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Emmons, M. B., Iowa City (Fort Sam Houston, Texas) .....1st Lt., A.U.S.
Flynn, J. E., Iowa City (Hot Springs, Ark.).....A.U.S.

Fourt, A. S., Iowa City (APO 1001, New York, N. Y.) ..... Col., A.U.S.
Francis, N. L., Iowa City (Annapolis, Md.) Lt. (jg), U.S.N.R.
Galinsky, L. J., Oakdale (Camp Crowder, Mo.) ..... Capt., A.U.S.
Garlinghouse, R. O., Iowa City (Fort Snelling, Minn.) .. A.U.S.
Hardin, R. C., Iowa City (APO 1001, New York, N. Y.) .... A.U.S.
Hartung, Walter, Iowa City (Fort Des Moines, Iowa) .. A.U.S.
Hessin, A. L., Iowa City ..... 1st Lt., A.U.S.
Irwin, R. L., Iowa City (Iowa City, Iowa) .. Lt. Comdr., U.S.N.R.
January, L. E., Iowa City (Moses Lake, Wash.) .... Capt., A.U.S.
Keislar, H. D., Iowa City (Camp Barkeley, Tex.) .. 1st Lt., A.U.S.
Lage, R. H., Iowa City (Santa Barbara, Cal.) ..... Lt., U.S.N.R.
Longwell, F. H., Iowa City (APO 505, New York, N. Y.) ..... Capt., A.U.S.
Nagyfy, S. F., Iowa City (Memphis, Tenn.) ... Lt. (jg), U.S.N.R.
Newman. R. W., Iowa City (Fleet PO, New York, N. Y.) ..... Lt., U.S.N.R.
Parkin, G. L., Iowa City (Carlisle Barracks, Pa.) .. 1st Lt., A.U.S.
Paulus, E. W., Iowa City (APO 1001, New York, N. Y.) ..... Lt. Col., A.U.S.
Petersen, V. W., Iowa City (APO 1001, New York, N. Y.) ..... Col., A.U.S.
Sells, R. L., Jr., Iowa City (Hamilton Field, Cal.) .1st Lt., A.U.S.
Smith, H. F., Iowa City (Great Lakes, Ill.) .Lt. Comdr., U.S.N.R.
Springer, E. W., Iowa City (APO 622, Miami, Fla.) .1st Lt., A.U.S.
Stadler, H. E., Iowa City (Washington, D. C.) .... 1st Lt., A.U.S.
Staggs, W. A., Iowa City (Camp Robinson, Ark.) .. 1st Lt., A.U.S.
Stephens, R. L., Iowa City (Orlando, Fla.) ..... Capt., A.U.S.
Stump, R. B., Iowa City (Fort Leonard Wood, Mo.) .. A.U.S.
Titus, E. L., Iowa City (Fort Wright, N. Y.) .... Col., A.U.S.
Vest, W. M., Iowa City (APO 928, San Francisco, Cal.) ..... Capt., A.U.S.
Ziffren, S. E., Iowa City (Springfield, Mo.) .... 1st. Lt., A.U.S.

Junior Members

Adams, M. P., Iowa City
Ahrens, J. H., Iowa City (APO San Francisco, Cal.) ..... A.U.S.
Ball, A. L., Iowa City (Camp Polk, La.) ..... Major, A.U.S.
Barrent, M. E., Iowa City (Camp Tyson, Tenn.) .. Capt., A.U.S.
Black, N. M., Iowa City (McChord Field, Wash.) 1st Lt., A.U.S.
Blair, J. D., Iowa City (APO San Francisco, Cal.) .Major, A.U.S.
Boyd, R. J., Iowa City (Spokane, Wash.) ..... Capt., A.U.S.
Brintnall, E. S., Iowa City (Colorado Springs, Colo.) ..... 1st Lt., A.U.S.
Burr, S. P., Iowa City (APO San Francisco, Cal.) .1st Lt., A.U.S.
Connole J. F., Iowa City (Camp Bowie, Texas) .. 1st Lt., A.U.S.
Couch, O. A., Iowa City (Camp Van Dorn, Miss.) .. 1st Lt., A.U.S.
Decker, C. E., Iowa City (Oklahoma City, Okla.) .. 1st Lt., A.U.S.
Donnelly B. A., Iowa City (APO San Francisco, Cal.) ..... 1st Lt., A.U.S.
Ehrenhaft, J. L., Iowa City (March Field, Cal.) .. 1st Lt., A.U.S.
Englerth, F. L., Iowa City (APO San Francisco, Cal.) ..... Capt., A.U.S.
Freiberg, M., Iowa City (Jefferson Barracks, Mo.) ..... A.U.S.
Glassman A. L., Iowa City (Palm Springs, Cal.) 1st Lt., A.U.S.
Gilliland, C. H., Iowa City (Great Lakes, Ill.) Lt. (jg), U.S.N.R.
Hamilton, H. E., Iowa City (Chicago, Ill.) ..... 1st Lt., A.U.S.
Harms, G. E., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Ide, L. W., Iowa City (Fort Warren, Wyo.) ..... 1st Lt., A.U.S.
Jacobs, C. A., Iowa City (APO New York, N. Y.) .Major, A.U.S.
Keil, P. G., Iowa City (Sioux City, Iowa) ..... 1st Lt., A.U.S.
Kelberg, M. R., Iowa City (Treasure Island, Cal.) ..... Lt. (jg), U.S.N.R
Keleher, M. F., Iowa City (Great Lakes, Ill.) .. Lt. (jg), U.S.N.R.
Keohen, G. F., Iowa City (Camp Grant, Ill.) .... Capt., A.U.S.
Kugler, F. E., Iowa City (Fort Warren, Wyo.) .... Capt., A.U.S.
Lowry, F. C., Iowa City (Sioux Falls, S. D.) .... 1st Lt., A.U.S.
McCann, J. P., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
McQuiston, W. O., Iowa City (Chicago, Ill.) .... 1st Lt., A.U.S.
Moen, B. H., Iowa City
Moon, R. E., Iowa City (Camp Bowie, Texas) .... 1st Lt., A.U.S.
Phillips, R. M., Iowa City (San Francisco, Cal.) 1st Lt., A.U.S.
Pulliam, R. L., Iowa City (Portland, Ore.) ..... Major, A.U.S.
Randall, C. G., Iowa City
Randall, R. G., Iowa City (Waterloo, Iowa) ..... Capt. A.U.S.
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.) ..... 1st Lt., A.U.S.
Russin, L. A., Iowa City (Fort Blanding, Fla.) .... Capt., A.U.S.
Saar, J. L., Iowa City (APO New York, N. Y.) .. Capt., A.U.S.
Sawtelle, W. W., Iowa City
Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Shand, J. A., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Shapiro, S. I., Iowa City
Simpson, F. E., Iowa City (Camp Grant, Ill.) ..... A.U.S.
Skewis, J. E., Iowa City (Rochester, N. Y.) .. Lt. (jg), U.S.N.R.
Skouge, O. T., Iowa City
Towle, R. A., Iowa City (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Warren, R. F., Iowa City (Santa Barbara, Cal.) ..... A.U.S.
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.) ..... 1st. Lt., A.U.S.
Wicks, W. J., Iowa City (Camp Crowder, Mo.) .... Capt., A.U.S.
Williams, L. A., Iowa City (Treasure Island, Cal.) .1st Lt., A.U.S.
Willumsen, H. C., Iowa City (Chico, Cal.) ..... Capt., A.U.S.
Wolkin, J., Iowa City (San Antonio, Texas) .... Capt., A.U.S.
Yetter, W. L., Iowa City (APO New York, N. Y.) Capt., A.U.S.
Zahrt, N. E., Iowa City (Miami Beach, Fla.) .... 1st Lt., A.U.S.
Zimmerman, H. A., Iowa City (Santa Ana, Cal.) .. 1st Lt., A.U.S.

Keokuk County

Bjork, Floyd, Keota (Camp Barkeley, Texas) ..... A.U.S.
Doyle, J. L., Sigourney (Camp Barkeley, Texas) ..... A.U.S.
Engelmann, A. T., What Cheer (Camp Polk, La.) Capt., A.U.S.
Graham, J. A., Gibson (Needles, Cal.) ..... 1st. Lt., A.U.S.
Montgomery, G. E., Keota (Fort Sam Houston, Texas) .... A.U.S.
Wiley, Dudley, Hedrick (Mason City, Wash.)

Kossuth County

Clapsaddle, D. W., Burt (Swannanoa, N. C.) ..... 1st Lt., A.U.S.
Williams, R. L., Lakota (San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.

Lee County

Ashline, G. H., Keokuk (Indiantown Gap, Pa.) .... Capt., A.U.S.
Cleary, H. G., Fort Madison (APO 726, Seattle, Wash.) ..... Capt., A.U.S.
Cooper, R. E., Keokuk (Fort Leonard Wood, Mo.)
Johnstone, A. A., Keokuk (Camp Robinson, Ark.) .... Col., A.U.S.
McKee, T. L., Keokuk (APO 922, San Francisco, Cal.) ..... Major, A.U.S.
Pumphrey, L. C., Keokuk (Ft. Leonard Wood, Mo.) ..... Major, A.U.S.
Rankin, J. R., Keokuk (Davenport, Iowa) ..... Lt., U.S.N.R.
Steffey, F. L., Keokuk (Fort Snelling, Minn.)
Van Werden, B. D., Keokuk (Fort Jackson, S. C.) .. Capt., A.U.S.

Linn County

Andre, G. R., Lisbon (Camp Barkeley, Texas) .... Major, A.U.S.
Berney, P. W., Cedar Rapids (San Francisco, Cal.) Capt., A.U.S.
Block, W. M., Cedar Rapids (Ft. Lewis, Wash.) .... 1st. Lt., A.U.S.
Chapman, R. M., Cedar Rapids (Chicago, Ill.) ..... Capt., A.U.S.
Coughlan, V. H., Coggon (Fort Snelling, Minn.)
Courter, W. O., Springville (Fort Warren, Wyo.) .... Capt., A.U.S.
Crew, P. I., Marion (Northfield, Vt.) ..... Capt., A.U.S.
Dunn, F. C., Cedar Rapids (Chicago, Ill.) ..... Capt., A.U.S.
Halpin, L. J., Cedar Rapids (Atlanta, Ga.) .... Major, A.U.S.
Hecker J. T., Cedar Rapids (Pecos, Texas) ..... 1st Lt., A.U.S.
Jirsa, H. O., Cedar Rapids (APO 871, New York, N. Y.) ..... Major, A.U.S.
Keith, J. J., Marion (APO 502, San Francisco, Cal.) ..... Major, A.U.S.
Kieck, E. G., Cedar Rapids (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Kruckenberg, W. G., Mount Vernon (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Locher, R. C., Cedar Rapids (Merced, Cal.) ..... Major, A.U.S.
MacDougal, R. F., Cedar Rapids (Carlisle Barracks, Pa.) ..... Capt., A.U.S.
McConkie, E. B., Cedar Rapids (Sioux Falls, S. Dak.) ..... Major, A.U.S.
McQuiston, J. S., Cedar Rapids (Salina, Kan.) .. Major, A.U.S.
Meffert, C. B., Cedar Rapids (Carlisle Barracks, Pa.) ..... Major, A.U.S.
Netolicky, R. Y., Cedar Rapids (San Francisco, Cal.) .Lt., U.S.N.R.
Noble, W. C., Cedar Rapids (Camp San Luis Obispo, Cal.) ..... 1st. Lt., A.U.S.
Noe, C. A., Cedar Rapids (Hot Springs, Ark.) .. Major, A.U.S.
Parke, John, Cedar Rapids (APO 34, New York, N. Y.) ..... Capt., A.U.S.
Proctor, R. D., Cedar Rapids (Corpus Christi, Texas) ..... Lt. Comdr., U.S.N.R.
Redmond, J. J., Cedar Rapids (APO 813, New York, N. Y.) ..... Major, A.U.S.
Rieniets, J. H., Cedar Rapids (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr, U.S.N.R.
Sedlacek, L. B., Cedar Rapids (Camp Shelby, Miss.) ..... Lt. Col., A.U.S.
Smrha, J. A., Cedar Rapids (APO 4665, San Francisco, Cal.) ..... Capt., A.U.S.
Stark, C. H., Cedar Rapids (Denver, Colo.) ..... Capt., A.U.S.
Sulek, A. E., Cedar Rapids (APO 960, San Francisco, Cal.) ..... Major, A.U.S
Woodhouse, K. W., Cedar Rapids (APO 34, New York, N. Y.) ..... Lt. Col., A.U.S.
Wray, R. M., Cedar Rapids (APO 958, San Francisco, Cal.) ..... Major, A.U.S.
Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.

Louisa County

DeYarman, K. T., Morning Sun (San Antonio, Texas) ..... 1st Lt., A.U.S
Tandy, R. W., Morning Sun (Norfolk, Va.) .. Lt. Comdr., U.S.N.R.

Lucas County

Lister, K. E., Chariton (Fort Snelling, Minn.)

Lyon County

Cook, S. H., Rock Rapids (Memphis, Tenn.) ..... Capt., A.U.S
‡Corcoran, T. E., Rock Rapids (APO New York) N. Y.) ..... Capt. A.U.S
Moriarty, J. F., Rock Rapids (APO 700, New York, N. Y.) ..... Capt. A.U.S.

Madison County

Boden, H. N., Truro (Fresno, Cal.)
Chesnut, P. F., Winterset (Portland, Ore.) ..... 1st Lt., A.U.S
Wicks, R. L., Winterset (Portland, Ore.)
Veltman, J. F., Winterset (APO 957, San Francisco, Cal.) ..... Capt., A.U.S.

Mahaska County

Bennett, G. W., Oskaloosa (Fort Riley, Kan.) .. Major, A.U.S.
Clark, G. H., Oskaloosa (Norman, Okla.) .. Lt. Comdr., U.S.N.R.
Greenlee, M. R., Oskaloosa (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Lemon, K.M., Oskaloosa ..... 1st Lt., A.U.S.
Zager, L. L., Oskaloosa (Camp Rucker, Ala.) .... 1st. Lt., A.U.S.

Marion County

Elliott, V. J., Knoxville (Portland, Ore.).....Capt., A.U.S.
Mater, D. A., Knoxville (Lincoln, Neb.).....Major, A.U.S.
Ralston, F. P., Knoxville (Indio, Cal.).....Capt., A.U.S.
Schiek, C. M., Knoxville.....Lt. Comdr., U.S.N.R.
Schroeder, M. C., Pella (Camp Uhlan, Texas)....1st Lt., A.U.S.
Williams, D. B., Knoxville.....Capt. A.U.S.

Marshall County

Carpenter, R. C., Marshalltown (APO New York, N. Y.).....Capt., A.U.S.
Marble, E. J., Marshalltown (San Diego, Cal.)....Lt., U.S.N.R.
Marble, W. P., Marshalltown (Walla Walla, Wash.) Capt., A.U.S.
Meyer, M. G., Marshalltown (APO 181, Los Angeles, Cal.).....Capt., A.U.S.
Noonan, J. J., Marshalltown (San Diego, Cal.)..Major, A.U.S.
Phelps, R. E., State Center (Fort Ord, Cal.).....Capt., A.U.S.
Sinning, J. E., Melbourne (Camp Robinson, Ark.)..Capt., A.U.S.
Smith, E. M., State Center (Sioux City, Ia.).....Lt. Col., A.U.S.
Stegman, J. J., Marshalltown (Portland, Ore.)..Capt., A.U.S.
Wells, R. C., Marshalltown (Gowen Field, Idaho) 1st Lt., A.U.S.
Wolfe, O. D., Marshalltown (Fort Riley, Kan.)..Capt., A.U.S.
Wolfe, R. M., Marshalltown (Cherry Point, N. C.).....Lt., U.S.N.R.

Mills County

DeYoung, W. A., Glenwood (APO 513, New York, N. Y.).....Capt., A.U.S.
Magaret, E. C., Glenwood (Lubbock, Texas)....1st Lt., A.U.S.
Shonka, T. E., Malvern (Camp Pickett, Va.).....Capt., A.U.S.

Mitchell County

Culbertson, R. A., St. Ansgar (Fort Knox, Ky.)...Lt. Col., A.U.S.
Moore, E. E., Osage (Camp Pickett, Virginia).....Major, A.U.S.
Owen, William, Osage (San Diego, Cal.).....Lt. (jg), U.S.N.R.
Walker, T. G., Riceville (Minneapolis, Minn.).....Lt., U.S.N.R.

Monona County

Almer, L. E., Moorhead (Fort Knox, Ky.).....A.U.S.
Anderson, S. A., Onawa (Corpus Christi, Tex.)....Lt., U.S.N.R.
Ganzhorn, H. L., Mapleton (Carlisle Barracks, Pa.).....1st. Lt., A.U.S.
Gaukel, L. A., Onawa (APO 937, Seattle, Wash.)..1st Lt., A.U.S.
†Harlan, M. E., Onawa (care PM, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Stauch, M. O., Whiting (Fort Rosecrans, Cal.).....A.U.S.
Wainwright, M. T., Mapleton (APO 939, Seattle, Wash.)..A.U.S.
Wolpert, P. L., Onawa (Rochester, Minn.).....1st Lt., A.U.S.

Monroe County

Heimann, V. R., Albia (Camp Maxey, Texas).....Capt., A.U.S.
Richter, H. J., Albia (Waco, Texas).....Capt., A.U.S.
Smith, R. A., Albia (San Antonio, Texas).....1st Lt., A.U.S.

Montgomery County

Bastron, H. C., Red Oak (APO 525, New York, N. Y.).....Major, A.U.S.
Hansen, F. A., Red Oak (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.
Moriarty, L. R., Villisca (APO 944, Seattle, Wash.).Capt., A.U.S.
Sorensen, E. M., Red Oak (Jefferson Barracks, Mo.).....1st. Lt., A.U.S.

Muscatine County

Ady, A. E., West Liberty (care PM, San Francisco, Cal.)U.S.N.R.
Asthalter, R. W., Muscatine (Fort Meade, Md.)..1st Lt., A.U.S.
Carlson, E. H., Muscatine (Kalamazoo, Mich.)....Capt., A.U.S.
Goad, R. R., Muscatine (Washington, D. C.) Lt. Comdr., U.S.N.R.
Kimball, J. E., Jr., West Liberty (APO Miami, Fla.)
Lindley, E. L., Muscatine (APO Los Angeles, Cal.).Capt., A.U.S.
Muhs, E. O., Muscatine (APO 4578, New York, N. Y.).....Capt., A.U.S.
Norem, Walter, Muscatine (APO Miami, Fla.)....Capt., A.U.S.
Robertson, T. A., West Liberty (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Sywassink, G. A., Muscatine (Camp Campbell, Ky.)Major, A.U.S.
Whitmer, L. H., Wilton Junction (Fort Sill, Okla.).Major, A.U.S.

O'Brien County

Getty, E. B., Primghar (Camp Robinson, Ark.)..1st Lt., A.U.S.
Hayne, W. W., Paullina (APO New York, N. Y.)..1st Lt., A.U.S.
Moen, S. T., Hartley (APO 3492, New York, N. Y.).Major, A.U.S.
Myers, K. W., Sheldon (Watertown, S. Dak.)..1st Lt., A.U.S.

Osceola County

Kuntz, G. S., Sibley (APO 34, New York, N. Y.)

Page County

Barnes, C. A., Shenandoah (Fort Bragg, N. C.)....Capt., A.U.S.
Blackman, Nathan, Shenandoah.....Capt., A.U.S.
Bossingham, E. N., Clarinda (APO 923, San Francisco, Cal.).....Capt., A.U.S.
Bunch, H. Mck., Shenandoah (Farragut, Idaho).....Lt. Comdr., U.S.N.R.
‡Burdick, F. D., Shenandoah (APO, New York, N. Y.).....Capt., A.U.S.
Burnett, F. K., Clarinda (Camp Carson, Colo.)....Major, A.U.S.
Little, E. B., Shenandoah.....1st Lt., A.U.S.
Rausch, G. R., Clarinda (Wendover Field, Utah) 1st Lt., A.U.S.
Savage, L. W., Shenandoah (Fort Meade, Md.)..1st Lt., A.U.S.

Palo Alto County

Davey, W. P., Emmetsburg (San Diego, Cal.) Lt. (jg), U.S.N.R.

Plymouth County

Bowers, C. V., LeMars (Carlisle Barracks, Pa.)..1st Lt., A.U.S.
Fisch, R. J., LeMars (Carlisle Barracks, Pa.)....1st Lt., A.U.S.
Foss, R. H., Remsen (Salt Lake City, Utah)..1st Lt., A.U.S.
Wolfson, Harold, Kingsley (Fort Lewis, Wash.)....Capt., A.U.S.

Pocahontas County

Blair, F. L., Jr., Fonda.....1st Lt., A.U.S.
Herrick, T. G., Gilmore City (Los Angeles, Cal.)...Capt., A.U.S.
Larson, J. B., Laurens (Camp Chaffee, Ark.).....Capt., A.U.S.
Leserman, L. K., Rolfe (APO 502, San Francisco, Cal.).....1st Lt., A.U.S.

Polk County

Abbott, W. D., Des Moines (Oakland, Cal.)..Lt. Comdr., U.S.N.R.
Anderson, N. B., Des Moines (APO 521, New York, N. Y.).....Lt. Col., A.U.S.
Angell, C. A., Des Moines (Camp Maxey, Texas)....Capt., A.U.S.
Anspach, R. S., Mitchellville (APO 528, New York, N. Y.).....Lt. Col., A.U.S.
Barner, J. L., Des Moines (Atlanta, Ga.)....Major, A.U.S.
Barnes, B. C., Des Moines (Ogden, Utah).....Capt., A.U.S.
Bates, M. T., Des Moines (Fleet PO, New York, N. Y.).....Lt. Comdr., U.S.N.R.
Bender, H. R., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Bond, T. A., Des Moines (Rochester, Minn.)....Lt. (jg), U.S.N.R.
Bone, H. C., Des Moines (Arlington, Cal.).....Capt., A.U.S.
Brown, A. W., Des Moines (Fort Leavenworth, Kan.).....Capt., A.U.S.
Bruner, J. M., Des Moines (Fort Bliss, Texas)....Major, A.U.S.
Bruns, P. D., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
‡Burgeson, F. M., Des Moines (Am. P.O.W. 4372, Oflag, 9 A/Z, Germany.....Capt., A.U.S.
Caldwell, J. W., Des Moines (Vulcan, Alberta, Canada).....Flight Lt., R.C.A.F.
Chambers, J. W., Des Moines (Fort Riley, Kan.)..1st Lt., A.U.S.
Chase, W. B., Jr., Des Moines (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.
Clark, G. E., Jr., Des Moines (Randolph Field, Texas).....1st Lt., A.U.S.
Connell, J. R., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Corn, H. H., Des Moines (St. Louis, Mo.).....1st Lt., A.U.S.
Coughlan, D. W., Des Moines (Camp Gruber, Okla.) Capt., A.U.S.
Crowley, D. F., Jr., Des Moines (APO New York, N. Y.).....Capt., A.U.S.
Crowley, F. A., Des Moines (APO New York, N. Y.).....1st Lt., A.U.S.
DeCicco, Ralph, Des Moines (APO Los Angeles, Cal.).....Capt., A.U.S.
Decker, H. G., Des Moines (Long Beach, Cal.)....Lt., U.S.N.R.
Downing, A. H., Des Moines (Fort Snelling, Minn.).....1st Lt., A.U.S.
Dushkin, M. A., Des Moines (Fort Huachuca, Ariz.).....Capt., A.U.S.
Elliott, O. A., Des Moines (Pecos, Texas).....Capt., A.U.S.
Ellis, H. G., Des Moines (Kearney, Nebr.).....Capt., A.U.S.
Ervin, L. J., Des Moines (Lubbock, Texas).....Major, A.U.S.
Fried, David, Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Fracasse, John, Des Moines.....1st Lt., A.U.S.
George, E. M., Des Moines (Camp Dodge, Iowa).....Lt. Comdr., U.S.N.R.
Gerchek, E. W., Des Moines
Gibson, D. N., Des Moines (Carlisle Barracks, Pa.).Major, A.U.S.
Goldberg, Louie, Des Moines (Gulfport, Miss.).....1st Lt., A.U.S.
Gordon, A. M., Des Moines (APO 763, New York N. Y.).....Capt., A.U.S.
Graeber, F. O., Des Moines (Aberdeen, S. Dak.)..1st Lt., A.U.S.
Greek, L. M., Des Moines (Camp Crowder, Mo.)..1st Lt., A.U.S.
Gurau, H. H., Des Moines (Santa Ana, Cal.).....1st Lt., A.U.S.
Haines, D. J., Des Moines (APO 7115, San Francisco, Cal.).....Capt., A.U.S.
Harris, D. D., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Harris, H. L., Des Moines.....1st Lt., A.U.S.
Hess, John, Jr., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
James, A. D., Des Moines (Fleet PO, San Francisco, Cal.).....Comdr., U.S.N.R.
Johnston, C. H., Des Moines (APO 639, New York, N. Y.).....Lt. Col., A.U.S.
Kast, D. H., Des Moines (Fort Stevens, Ore.).....Capt., A.U.S.
Kelley, E. J., Des Moines (Kansas City, Mo.).....Lt. Comdr., U.S.N.R.
Kelly, D. H., Des Moines (Denver, Colo.).....Lt. Col., A.U.S.
Klocksiem, H. L., Des Moines.....Lt. (jg), U.S.N.R.
Kottke, E. E., Des Moines (Temple, Texas).....Capt., A.U.S.
Landis, S. N., Des Moines (West Palm Beach, Fla.).....1st Lt., A.U.S.
La Tona, Salvatore, Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Lederman, James, Des Moines.....1st Lt., R.C.A.
Lehman, E. W., Des Moines (Memphis, Tenn.)....Major, A.U.S.
Lovejoy, E. P., Des Moines (Mare Island, Cal.).....Lt. Comdr., U.S.N.R.
Maloney, P. J., Des Moines (Fort Lewis, Wash.)...1st Lt., A.U.S.
Marquis, G. S., Des Moines (Chicago, Ill.)..Lt. Comdr., U.S.N.R.
Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.
Mauritz, E. L., Des Moines (APO 763, New York, N. Y.).....1st Lt., A.U.S.
McCoy, H. J., Des Moines (Iowa City, Iowa)...Comdr., U.S.N.R.
McDonald, D. J., Des Moines (March Field, Cal.).Capt., A.U.S.
McNamee, J. H., Des Moines (Oakland, Cal.).....Lt. Comdr., U.S.N.R.
Mencher, E. W., Des Moines.....1st Lt., A.U.S.
Merkel, B. M., Des Moines (Colorado Springs, Colo.).....Major., A.U.S.
Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.).....Capt., A.U.S.

Morden, R. P., Des Moines (APO 4570, New York, N. Y.) ..... 1st Lt., A.U.S.
Murphy, J. H., Des Moines (San Diego, Cal.) ..... Lt., U.S.N.R.
Nelson, A. L., Des Moines (Camp Livingston, La.) Capt., A.U.S.
Noun, L. J., Des Moines (Fleet PO, New York, N. Y.) ..... Lt. (jg), U.S.N.R.
Noun, M. H., Des Moines (APO 871, New York, N. Y.) ..... Major, A.U.S.
Nourse, M. H., Des Moines (Bethesda, Md.) .. Lt. (jg), U.S.N.R.
Patton, B. W., Des Moines (Camp Robinson, Ark.) ..... 1st Lt., A.U.S.
Pearlman, L. R., Des Moines (APO 980, Seattle, Wash.) ..... Major, A.U.S.
Peisen, C. J., Des Moines (Camp Perry, Ohio) .. 1st Lt., A.U.S.
Penn, E. C., West Des Moines (Spokane, Wash.) ..... 1st Lt., A.U.S.
Pfeiffer, E. P., Des Moines (Springfield, Mo.) .... Capt., A.U.S.
Phillips, A. B., Des Moines (Corpus Christi, Texas) ..... Lt., U.S.N.R.
Porter, R. J., Des Moines (Sioux City, Iowa) ..... 1st Lt., A.U.S.
Powell, L. D., Des Moines (Long Beach, Cal.) ... Comdr., U.S.N.R.
Pratt, E. B., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Priestley, J. B., Des Moines (Camp Phillips, Kan.) .. Major, A.U.S.
Purdy, W. O., Des Moines (Camp Howze, Texas) .. Capt., A.U.S.
Riegelman, R. H., Des Moines (APO 634, New York, N. Y.) ..... Major, A.U.S.
Robinson, V. C., Des Moines (Tampa, Fla.) .... Capt., A.U.S.
Rotkow, M. J., Des Moines (Louisville, Ky.) .... 1st Lt., A.U.S.
Schaeferle, M. J., Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Schlaser, V. L., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Shepherd, L. K., Des Moines (APO New York, N. Y.) ..... 1st Lt., A.U.S.
Shifler, H. K., Des Moines (APO New York, N. Y.) . Capt., A.U.S.
Singer, P. L., Des Moines (Camp Grant, Ill.) .. 1st Lt., A.U.S.
Skultety, J. A., Des Moines (Brownsville, Texas) ..... 1st. Lt., U.S.P.H.S.
Smead, H. H., Des Moines (Nashville, Tenn.) ..... Capt., A.U.S.
Smith, H. J., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Smith, R. T., Des Moines (Meridian, Miss.) .... 1st Lt., A.U.S.
Snodgrass, R. W., Des Moines (Fort Rosecrans, Cal.) ..... Capt., A.U.S.
Snyder, G. E., Grimes (Spadra, Cal.) ..... Major, A.U.S.
Sohm, H. A., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Sorensen, R. M., Des Moines (Topeka, Kan.) . Major, U.S.P.H.S.
Springer, F. A., Des Moines (Treasure Island, Cal.) ..... Lt. Comdr., U.S.N.R.
Stearns, A. B., Des Moines (Denver, Colo.) .. Major, A.U.S.
Stickler, Robert, Des Moines (Fort Benning, Ga.) 1st. Lt., A.U.S.
Stitt, P. L., Des Moines (Seattle, Wash.) .... Lt. (jg), U.S.N.R.
Throckmorton, J. F., Des Moines (Camp Howze, Texas) ..... Capt. A.U.S.
Toubes, A. A., Des Moines (Leland, Miss.) ..... 1st Lt., A.U.S.
Turner, H. V., Des Moines (Tyler, Texas) ..... 1st Lt., A.U.S.
Updegraff, Thomas, Des Moines (Spokane, Wash.) . 1st Lt., A.U.S.
Van Hale, L. A., Des Moines (Transfer. Penn.) .... 1st Lt., A.U.S.
Vaubel, E. K., Des Moines (Portland, Ore.) ..... Capt., A.U.S.
Wagner, E. C., Des Moines (Washington, D. C.) .. 1st Lt., A.U.S.
Willett, W. M., Des Moines (Fort Bragg, N. C.) .. 1st Lt., A.U.S.
Wirtz, D. C., Des Moines (Brooklyn, N. Y.) .. Lt. Comdr., U.S.N.R.
Zarchy, A. C., Des Moines (Camp Cook, Cal.) ..... Capt., A.U.S.

Pottawattamie County

‡Beaumont, F. H., Council Bluffs (APO 34, New York, N. Y.) ..... Major, A.U.S.
Cogley, J. P., Council Bluffs (Fort Ord, Cal.) .... Major., A.U.S.
Collins, R. M., Council Bluffs (San Diego, Cal.) .... Lt., U.S.N.R.
Dean, A. M., Council Bluffs (Pensacola, Fla.) ..... Lt. Comdr., U.S.N.R.
Edwards, C. V., Council Bluffs (Olathe, Kan.) ..... Lt. Comdr., U.S.N.R.
Hennessy, J. D., Council Bluffs (Chicago, Ill.) .. Lt., U.S.N.R.
Jensen, A. L., Council Bluffs (APO 952, San Francisco, Cal.) ..... Lt. Col., A.U.S.
Klok, G. J., Council Bluffs (Fleet PO, San Diego, Cal.) ..... Lt., U.S.N.R.
Kurth, C. J., Council Bluffs (Camp Crowder, Mo.) . 1st Lt., A.U.S.
Limbert, E. M., Council Bluffs (Camp Crowder, Mo.) ..... Capt., A.U.S.
Maiden, S. D., Council Bluffs (San Francisco Cal.) ..... Major, A.U.S.
Martin, L. R., Council Bluffs (Camp Rucker, Ala) .. Capt., A.U.S.
Moskovitz, J. M., Council Bluffs (Camp Lockett Cal.) ..... Capt., A.U.S.
Sternbill, Isaac, Council Bluffs (APO 3552, Seattle, Wash.) ..... Capt., A.U.S.
Tinley, R. E., Council Bluffs (APO New York, N. Y.) ..... Capt., A.U.S.
Treynor, J. V., Council Bluffs (South Bend, Ind.) ..... Lt. Comdr., U.S.N.R.
Wieseler, R. J., Avoca (McChord Field, Wash.) ..... A.U.S.
Wurl, O. A., Council Bluffs (APO 871, New York, N. Y.) ..... Capt., A.U.S.

Poweshiek County

Brobyn, T. E., Grinnell (Fort Ord, Cal.) ..... Capt., A.U.S.
Hickerson, L. C., Brooklyn (Oxnard, Cal.) ..... 1st. Lt., A.U.S.
Korfmacher, E. S., Grinnell (San Francisco, Cal.) ..... Capt., A.U.S.
Niemann, T. V., Brooklyn (Camp Shelby, Miss.) ..... 1st Lt., A.U.S.
Parish, J. R., Grinnell (Treasure Island, Cal.) ..... Lt. Comdr., U.S.N.R.

Ringgold County

Seaman, C. L., Mount Ayr (Van Buren, Ark.) .. Capt., A.U.S.

Sac County

Bassett, G. H., Sac City (San Diego, Cal.) .. Lt. Comdr., U.S.N.R.
Deters, D. C., Schaller (APO 1001, New York, N. Y.) ..... Capt., A.U.S.
Evans, W. I., Sac City (Camp Hood, Texas) ..... Capt., A.U.S.
Klocksiem, R. G., Odebolt (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Neu, H. N., Sac City (Portland, Ore.) ..... Major, A.U.S.

Scott County

Baker, R. W., Davenport (Rock Island, Ill.) .. 1st Lt., A.U.S.
Balzer, W. J., Davenport (APO Seattle, Wash.) .. 1st Lt., A.U.S.
Bishop, J. F., Davenport (APO 972, Seattle, Wash.) ..... 1st Lt., A.U.S.
Block, L. A., Davenport (APO 534, New York, N. Y.) ..... Major, A.U.S.
Boden, W. C., Davenport (APO 3760, New York, N. Y.) ..... Capt., A.U.S.
Boyer, U. S., Davenport (Rock Island, Ill.) ..... Lt. Col., A.U.S.
Brown, D. H., Davenport (Waycross, Ga.) ..... Capt., A.U.S.
Brown, M. J., Davenport (Camp Hale, Colo.) ..... Capt., A.U.S.
Carey, E. T., Davenport (Fort Andrews, Mass.) .. 1st Lt., A.U.S.
Christiansen, C. C., Dixon (APO 1104, San Francisco, Cal.) ..... 1st Lt., A.U.S.
Cummins, G. M., Jr., Davenport ..... 1st Lt., A.U.S.
Decker, C. E., Davenport (Oklahoma City, Okla.) ..... 1st Lt., A.U.S.
Evans, H. J., Davenport (Colorado Springs, Colo.) . Capt., A.U.S.
Gibson, P. E., Davenport (Palm Springs, Cal.) ..... Capt., A.U.S.
Hurevitz, H. M., Davenport (APO New York, N. Y.) . Capt., A.U.S.
Hurteau, Everett, Davenport (APO 534, New York, N. Y.) ..... Capt., A.U.S.
Hurteau, W. W., Davenport (Camp Barkeley, Texas) ..... Major, A.U.S.
Kimberly, L. W., Davenport (New Orleans, La.) . Capt., A.U.S.
Krakauer, Max, Davenport (Fort Hayes, Ohio) .... 1st Lt., A.U.S.
LaDage, L. H., Davenport (Camp Campbell, Ky.) .. Capt., A.U.S.
Lorfeld, G. W., Davenport (Waynesburg, Pa.) ..... Capt., A.U.S.
Marker, J. I., Davenport (Camp Carson, Colo.) .. Col., A.U.S.
McMeans, T. W., Davenport (APO New York, N. Y.) ..... 1st Lt., A.U.S.
Neufeld, R. J., Davenport (Rock Island, Ill.) ..... Capt., A.U.S.
Sheeler, I. H., Davenport (Omaha, Neb.) ..... 1st Lt., A.U.S.
Smazal. S. F., Davenport (Pando, Colo.) ..... 1st Lt., A.U.S.
Sorenson, A. C., Davenport (Oakland, Cal.) .. Lt. Comdr., U.S.N.R.
Sunderbruch, J. H., Davenport (Paris, Texas) .... 1st Lt., A.U.S.
Weinberg, H. B., Davenport (Fort Benning, Ga.) .. Major, A.U.S.
Zukerman, C. M., Bettendorf (Cincinnati, Ohio) .... Capt., A.U.S.

Shelby County

Bisgard, C. V., Harlan (Farragut Air Base, Idaho) ..... Lt. Comdr., U.S.N.R.
Griffith, W. O., Shelby (Camp Davis, N. C.) ..... A.U.S.
McGowan, J. P., Harlan (San Diego, Cal.) .. Lt. Comdr., U.S.N.R.

Sioux County

Gleysteen, R. R., Alton (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.
Grossmann, E. B., Orange City (Fort Sam Houston, Texas) ..... 1st Lt., A.U.S.
Larsen, M. O., Hawarden (Camp Bowie, Texas) .. Major, A.U.S.
Oelrich, A. M., Hull (Carlisle Barracks, Pa.) .... 1st. Lt., A.U.S.
Oelrich, C. D., Sioux Center (Biloxi, Miss.) ..... 1st Lt., A.U.S.

Story County

Conner, J. D., Nevada (Camp Robinson, Ark.) .... 1st Lt., A.U.S.
Fellows, J. G., Ames (Ft. Leonard Wood, Mo.) ..... Capt., A.U.S.
Lekwa, A. H., Story City (San Diego, Cal.) .. Lt. Comdr., U.S.N.R.
McFarland, G. E., Jr.. Ames (San Pedro, Cal.) .... Lt.. U.S.N.R.
McFarland, J. E., Ames (Farragut, Idaho) .. Lt. Comdr., U.S.N.R.
Rosebrook, L. E., Ames (San Antonio, Texas) ..... 1st Lt.. A.U.S.
Sperow, W. B., Nevada (San Diego, Cal.) .. Lt. Comdr., U.S.N.R.
Thorburn, O. L., Ames (Santa Ana, Cal.) ..... Major. A.U.S.

Tama County

Bezman, H. S., Traer (Camp Hood, Tex.) ..... 1st. Lt.. A.U.S.
Boller, G. C., Traer (Camp Bowie, Texas)
Dobias, S. G., Chelsea (APO 937, Seattle, Washington)
Havlik, A. J., Tama (Fleet PO, San Francisco, Cal.) . Lt., U.S.N.R.
Schaeferle, L. G., Gladbrook (Fort Leonard Wood, Mo.)
Standefer, J. M., Tama (San Diego, Cal.)

Taylor County

Hardin, J. F., Bedford (APO 4162, San Francisco, Cal.) ..... 1st Lt., A.U.S.

Union County

Paragus, M. R., Creston (Tampa, Fla.) ..... Capt., A.U.S.
Ryan, C. J., Creston (Scribner, Neb.) ..... 1st Lt., A.U.S.

Wapello County

Brentan, Emanuel, Ottumwa (APO 252, New York, N. Y.) ..... 1st Lt., A.U.S
Brody, Sidney, Ottumwa (APO New York, N. Y.) .. Major, A.U.S
Gilfillan, C. D. N., Eldon (Battle Creek, Mich.) ..... Capt.. A.U.S.
Hughes, R. O., Ottumwa (Coronado, Cal.) .. Lt. Comdr., U.S.N.R.
Moore, G. C., Ottumwa (Carlisle Barracks, Pa.) .... 1st Lt., A.U.S.

Nelson, F. L., Jr., Ottumwa (APO 4774, New York, N. Y.) ..... Capt., A.U.S.
Prewitt, L. H., Ottumwa (March Field, Cal.) ..... Major, A.U.S.
Selman, R. J., Ottumwa (El Paso, Texas) ..... Lt. Col., A.U.S.
Struble, G. C., Ottumwa (Fort Harrison, Ind.) ..... Lt. Col., A.U.S.
Whitehouse, W. N., Ottumwa (San Diego, Cal.) ..... Lt. Comdr., U.S.N.R.
Worley, C. L., Ottumwa (Camp Young, Cal.) ..... Capt., A.U.S.

Warren County

Fullgrabe E. A., Indianola (Bethesda, Md.) Lt. (jg), U.S.N.R.
Hoffman, G. R., Lacona (Camp San Luis Obispo, Cal.) ..... Capt., A.U.S.
Shaw, E. E., Indianola (APO 827, New Orleans, La.) ..... Capt., A.U.S.
Trueblood, C. A., Indianola (Camp Campbell, Ky.) .. Capt., A.U.S.

Washington County

Boice, C. L., Washington (Atlantic City, N. J.) ..... Lt., U.S.N.
Droz, A. K., Washington (Grosse Ile, Mich.) . Lt. Comdr., U.S.N.R.
Mast, T. M., Washington (Portland, Ore.) ..... Lt. U.S.N.R.
Stutsman, R. E., Washington (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Ware, S. C., Kalona (A. P. Hill Mil. Res., Va.) ..... Capt., A.U.S.

Wayne County

Hyatt, C. N., Jr., Humeston (Indio, Cal.) ..... Capt., A.U.S.

Webster County

Baker, C. J., Fort Dodge (APO New York, N. Y.) ... Capt., A.U.S.
Burch, E. S., Dayton (Camp Livingston, La.) ..... Capt., A.U.S.
Burleson, M. W., Fort Dodge (Brigham City, Utah) ..... 1st Lt., A.U.S.
Coughlan, C. H., Fort Dodge (Jefferson Barracks, Mo.) ..... Major, A.U.S.
Dawson, E. B., Fort Dodge (San Diego, Cal.) ..... Lt. Comdr., U.S.N.R.
Glesne, O. N., Ft. Dodge (Great Lakes, Ill.) .. Lt. Comdr., U.S.N.R.
Joyner, N. M., Fort Dodge (Brooklyn Field, Ala.)
Kluever, H. C., Fort Dodge (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Larsen, H. T., Fort Dodge (Baltimore, Md.) ... Lt. (jg), U.S.N.R.
Shrader, J. C., Fort Dodge (APO 180, Los Angeles, Cal.) ..... Major, A.U.S.
Thatcher, O. D., Fort Dodge (APO 634, New York, N. Y.) ..... Capt., A.U.S.
Thatcher, W. C., Fort Dodge (APO 464, New York, N. Y.) ..... Capt., A.U.S.
Van Patten, E. M., Ft. Dodge (Alamogordo, N. M.) . 1st Lt., A.U.S.

Winneshiek County

Fritchen, A. F., Decorah (APO San Francisco, Cal.) ..... Comdr., U.S.N.R.
Hospodarsky, L. J., Ridgeway (Seattle, Wash.) .. Capt., A.U.S.
Larson, L. E., Decorah (Farragut, Idaho) ..... Lt., U.S.N.R.
Svendsen, R. N., Decorah (San Diego, Calif.) .. Lt. (jg) U.S.N.R.
Van Besien, G. J., Decorah (APO New York, N. Y.) ..... 1st Lt., A.U.S.

Woodbury County

Bettler, P. L., Sioux City (APO San Francisco, Cal.) ..... Major, A.U.S.
Blackstone, M. A., Sioux City (Pittsburg, Cal.) . 1st Lt., A.U.S.
Boe, Henry, Sioux City (Salina, Kan.) ..... Capt., A.U.S.
Burroughs, H. H., Sioux City (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
*Cmeyla, P. M., Sioux City (APO San Francisco, Cal.) ..... Capt., A.U.S.
Cowan, J. A., Sioux City (Oklahoma City, Okla.) ..... Major, U.S.P.H.S.
Crowder, R. E., Sioux City (San Diego, Cal.) . Lt. Comdr., U.S.N.R.
Dimsdale, L. J., Sioux City (Clinton, Iowa) ..... 1st Lt., A.U.S.
Down, H. I., Sioux City (Camp Breckenridge, Ky.) Major, A.U.S.
Elson, V. J., Danbury (Camp Walters, Tex.) ..... Capt., A.U.S.
Frank, L. J., Sioux City (Mare Island, Cal.) . Lt. Comdr., U.S.N.R.
Graham, J. W., Sioux City (San Diego, Cal.) . Lt. Comdr., U.S.N.R.
Grossman, M.D., Sioux City (APO 33, San Francisco, Cal.) ..... Capt., A.U.S.
Heffernan, C. E., Sioux City (Salt Lake City, Utah) ..... 1st Lt., A.U.S.
Hicks, W. K., Sioux City (Spokane, Wash.) ..... Major, A.U.S.
Honke, E. M., Sioux City (Palm Springs, Cal.) .. Capt., A.U.S.
Kaplan, David, Sioux City (Fort Bragg, N. C.) .. 1st Lt., A.U.S.
Knott, R. C., Sioux City (Atlanta, Ga.) ..... Capt., A.U.S.
Krigsten, W. M., Sioux City (Springfield, Mo.) .. Lt. Col., A.U.S.
Lande, J. N., Sioux City (El Paso, Texas) ..... Major, A.U.S.
Martin, R. F., Sioux City (Gallatin, Tenn.) ..... 1st. Lt., A.U.S.
Mattice, L. H., Danbury (APO 4580, San Francisco, Cal.) ..... 1st Lt., A.U.S.
McCuistion, H. M., Sioux City (APO New York, N. Y.) ..... Capt., A.U.S.
Mugan, R. C., Sioux City (Gowen Field, Idaho) .. 1st Lt., A.U.S.
Osincup, P. W., Sioux City (Edgewood Arsenal, Md.) ..... 1st Lt., A.U.S.
Rarick, I. H., Sioux City (APO 980, Seattle, Wash.) .. Capt., A.U.S.
Reeder, J. E., Jr., Sioux City (Modesto, Cal.) .... Capt., A.U.S.
Ryan, M. J., Sioux City (Topeka, Kan.) ..... Capt., A.U.S.
Schwartz, J. W., Sioux City (Ft. Leavenworth, Kan.) ..... Lt. Col., A.U.S.
Tracy, J. S., Sioux City (Ephrata, Wash.) ..... Capt., A.U.S.
Wilson, L. L., Sioux City (Camp San Luis Obispo, Cal.) ..... Capt., A.U.S.

Worth County

Westly, G. S., Manly (APO 4580, San Francisco, Cal.) ..... Major, A.U.S.

Wright County

Aageson, C. A., Dows
Bird, R. G., Clarion (Sacramento, Cal.) ..... Lt. Comdr., U.S.N.R.
Doles, E. A., Clarion (Phoenix, Ariz.)
Leinbach, S. P., Belmond (Farragut Air Base, Idaho)
Missildine, W. H., Eagle Grove (APO 25, San Francisco, Cal.) ..... Capt., A.U.S.

(*) Reported missing in action.
(†) Reported killed in action.
(‡) Reported prisoner of war.

NAVY URGENTLY IN NEED OF QUALIFIED WOMEN MEDICAL OFFICERS

The Navy is in need of qualified women to serve as Medical Officers. Because of the emergency conditions which exist today and the urgent needs for male or female physicians, two programs have been adopted for which applications are desired. They are:

Specialist Medical Officers: These applicants must be graduates from an accredited medical school, with one year of internship in an approved hospital, who are duly licensed to practice medicine and are members of a local or state medical society, with at least three years of recent practical experience in a particular specialty. Applicants must be between twenty-seven and fifty years of age. Duties of this group will be principally along the lines of the individual's particular specialty.

General Medical Officers: Applicants who meet the requirements of this class must have the same education as those accepted for Specialist Medical Officers, except that because of the emergency, internship, license, and membership in a recognized medical society may be waived provided the candidate makes application immediately upon graduation from an accredited medical school. Candidates for this group must be between twenty-one and thirty-five years of age. This group will be assigned to the general practice of medicine and surgery with duty limited at the present time to shore duty within the continental limits of the United States, although there is a bill now before Congress which may extend this duty to cover foreign shore activities if the individual volunteers for such duty.

No application for appointment in either of these classifications can be considered without the release of the State Procurement and Assignment Board.

Applications may be made at the Office of Naval Officer Procurement, Room 208, Old Federal Building, Des Moines. There will also be a traveling board in Sioux City September 9, 10 and 11, and in Waterloo September 23, 24 and 25, to which interested women physicians may apply.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. W. S. REILEY, Red Oak
President-Elect—MRS. J. C. DECKER, Sioux City
Secretary—MRS. A. G. FELTER, Van Meter
Treasurer—MRS. A. E. MERKEL, Des Moines

THE PRESENT TREND OF MEDICAL LEGISLATION

Ransom D. Bernard, M.D., Clarion.

[*Note: This address was delivered at the Fourteenth Annual Convention of the Woman's Auxiliary to the Iowa State Medical Society, Des Moines, April 30, 1943, and is being printed by request of many who heard it.*]

I shall discuss this subject under the following headings: Federal, State, and Local Legislative Activities.

Federal Legislation: Federal legislative activity arranges itself naturally into two groups, the first of which is that dealing with the Social Security program. No Social Security program for this nation would be complete without a vast rearrangement of our United States Public Health Service, a national hospitalization program, and many changes in the medical and surgical care of the one hundred and thirty million people involved in the program. In fact, the original Social Security Bill included many of these changes, but due to the antagonism aroused in the medical profession the plan was modified and few changes involving medical service were included.

However, there are many ways to accomplish an objective. Grants-in-aid to states, better care of the blind, aid to dependent children, old age pensions, and the gradual expansion of the United States Public Health Service have accomplished in a few short years practically the whole program with little, if any, resistance from the medical profession or the public in general. The groups in charge of this program, in which medical men are conspicuously absent, have gazed over the horizon to the east and observed many Utopian plans. Russia, Finland, Germany and England have all been working for years with these plans and as yet have produced no medical service equal to that which we, as Americans, have enjoyed. One must not lose sight of the fact that in England, for instance, medical service was extremely poor for generations and that the government was forced to evolve some plan to improve conditions, but their plan, in spite of the fact that we are told it is a great success, is not the solution of our problem.

The American system has its faults. It has been difficult to draw a clear-cut dividing line between problems of health which can be administered by only the national government and those which must be administered by the individual states. It has also been difficult to differentiate between the fields of preventive and curative medicine. A critical but an unimaginative profession has been extremely slow to grasp these problems and attempt their solution, waiting for the economist and the politician to observe our weaknesses and capitalize upon them. We, as a profession, object to socialized medicine, but just what have we done? Survey after survey has been made by the government at our expense. These have *always* shown the medical profession in a bad light; the public has been given the results of these surveys, educated to be critical of us, and we have been blamed for poor medical service in certain communities when in reality economic conditions were entirely to blame. After these adverse build-ups it has not been a difficult matter to enact legislation definitely of a socialistic nature. Experimentation is combining economic and medical services has been instituted by the government in an attempt to solve many of these problems. A few have succeeded; many have failed. Laws have been enacted where only working agreements between doctors and economists could have accomplished the result. The depression is to blame for many of these adverse laws, and the war has given the heralds of Utopia a great opportunity. Under the guise of war emergency it is easy to "reform" our medical service with little or no opposition. We look with fear and trembling upon the new "cradle to the grave" plan recently sent to Congress by the President, yet practically all of its provisions are now the law. We *do* have "cradle to the grave" medical care under federal government supervision. Prenatal care, maternity care, child care, even burial expense for most of the pensioners of the government are here *now*. As yet it is part of our war program, but we will be so accustomed to this care during the next few years that it is an easy step to *tax* the dear public and carry on indefinitely.

Thus the trend of legislation has been a gradual accomplishment of the original Social Security plan, by education and step-by-step legislation. We are having the dividing lines between preventive medicine and curative medicine sharply defined. Bill S-400, reorganizing the Public Health Service, grants the Service many extensions, services which their remarkable record of magnificent accomplishments well deserves. You may expect an unusual expansion of this service which, if properly supervised, will not interfere with the practice of

medicine but will, in reality, relieve the practicing physician of many duties he now detests.

On March 10 the President sent to Congress the report of the National Resources Planning Board; I quote: "We must seek not merely to avoid the loss through ill health, accidents, and premature death of our most valuable national resource and to eliminate the unnecessary costs of maintaining those who are rendered incapable by reason of previous neglect, but we must also see that it is possible for all our people to enjoy a state of buoyant health and vigor." To achieve these objectives, the report recommends action along the following lines:

"a. Health measures and adequate nutrition in order to eliminate all diseases, disabilities, and premature deaths which are preventable in the light of existing knowledge, through:

"(1) The development of adequate public health services and facilities in every county within the country.

"(2) The development of a health program for mothers and children ensuring remedial treatment as well as diagnosis and advisory services, maternal and child health clinics; and health services in the schools.

"(3) Protection of workers whether in the factory or on the farm from unnecessary accidents, controllable occupational diseases, and undue fatigue.

"(4) Continued support from public and private funds for public health research and education with a view to the progressive expansion of the frontiers of control over health hazards.

"(5) Continued support for public and private agencies engaged in the dissemination of knowledge of sound nutritional principles and practices. Especial attention should be devoted to demonstration work in the schools, the factories and farming areas.

"b. Assurance of adequate medical and health care for all, regardless of place of residence or income status and on a basis that is consistent with the self-respect of the recipient, through:

"(1) Federal appropriations to aid States and localities in developing a system of regional and local hospitals and health centers covering all parts of the country.

"(2) Assurance of an adequate and well distributed supply of physicians, dentists, nurses, and other medical personnel.

"(3) Expansion and improvement of public medical care for needy persons through larger appropriations and through increased cooperation by and with the medical and dental professions.

"(4) Immediate action by government in cooperation with the medical profession to formulate plans which enable the patient to budget expenses over a reasonable period and to contribute toward the costs of care according to his ability, and which at the same time assure to medical personnel a decent livelihood commensurate with the high costs of their professional training."

These are well worded recommendations, but when they are translated into laws they mean the complete socializing of medicine.

This Washington penchant for chameleon prophecy, statement and counter statement, vacillating orders and general obscurity is leaving the American public, and the medical profession in particular, in a stupor of hopeless perplexity.

Most members of Congress seem to think that they must offer some legislation granting special privileges to the men and women in the armed forces; if nothing more, it is good politics. We now have a women's medical corps for both the Army and Navy. But they have gone further. All men and women in defense work are to receive these benefits. We are all set for a huge pension plan for war workers. Air wardens are to be cared for, in fact may be granted almost unlimited aid if they are injured in the line of duty.

Second, the cults have attacked the citadels of Washington. The chiropractors seek, through our own Senator Gillette, to be permitted to care for certain groups of federal employees. It is possible the osteopaths may be commissioned medical officers in the Navy. They are well entrenched in Washington, but for some reason the Army and Navy frown upon them. Not so the United States Public Health Service, which does not oppose them as reserve officers.

State Legislation: In this group I again make two divisions. The first is constructive legislation introduced. (It is too early to have accurate reports on legislation passed.) Two states wish to license maternity homes and several wish to license convalescence homes. One state is attempting to create county health boards and abolish the office of coroner. Legislation along this line was considered in Iowa this year but was not found feasible. A few states are attempting to regulate the practice of optometry; Iowa was one of these. Lien laws were attempted in a few states; this is not popular legislation. Six states attempted to pass compulsory vaccination bills; so far none have been successful. Seven states are attempting to enact prenatal bills; these are meeting with some success. Alcohol blood tests for drunken drivers are not popular bills; our own bill was not considered. Twenty-three states are considering premarital bills; several bills are now the law. This is popular legislation. Six states are attempting to pass enabling acts for nonprofit hospital insurance and five states are attempting the same legislation for medical service plans. Hundreds of bills affecting the foregoing subjects have created endless work for the various legislative committees; however, most of these bills die in committee.

The Basic Science Laws of six states were attacked. No basic science law has ever been repealed.

Not the least of the legislative troubles have been bills similar to the following: bills granting pensions to parents of handicapped children; bills permitting abortions (legalizing same) under certain conditions; and bills requiring a penalty of life imprisonment for procuring an abortion.

In Minnesota the Kenny treatment was to be protected by law.

Second is cult legislation. This has been a gala year for the cults. Masseurs, specialists in electrolysis, have asked for the title of Doctor and special examining boards. Psychiatrists have requested a special examining board. Christian Scientists have been very active, demanding all sorts of recognition, even to caring for Workman Compensation cases, and in Ohio they wished to have their art construed as the practice of medicine. In five states the physiotherapy group asked for special recognition and a special examining board. The osteopaths were active as usual; in some states they demanded the right to practice medicine, in others special boards (similar to the board we have in Iowa). However, there were but eight states in which they really caused trouble. The chiropractors demanded attention in fourteen states: special boards, the right to care for Workman Compensation cases, tricky educational requirements, etc. In nearly every state they had some form of legislation pending. Chiropody is becoming a much discussed art. You are aware that the chiropodists asked for a special corps in the Army with officers of rather high rank. In New York they demand that foot injuries in industrial work must be referred to them, and in many states they demand the right to use a hypodermic. In fifteen states the naturopaths were exceedingly active. This group is increasing very rapidly. They include almost everything—in some instances chiropractic—and have been granted special boards in some states. This group is growing faster than the chiropractors. They will bear watching.

Local Legislative Activities: From the foregoing review it is evident that during the past winter the Legislative Committee of the State Society profited by the work of the past. We have discouraged "cult" legislation because we feel that no good can result from recognizing this or that cult which seeks to "practice the healing arts" without years of careful preparation. However, they are growing incessantly, are organizing among lay groups, and we may expect an outbreak at almost any time. No legislation was attempted. Only one cult bill was introduced and we were fortunate in eliminating it. Iowa is also fortunate in having satisfactory basic science, prenatal, and premarital laws. There was one effort to amend the premarital law; this involved servicemen and as such was not opposed, although we did not favor amending a perfectly satisfactory law. Fortunately it died in the sifting committee. We have also never favored waving the banner and marching at the head of the other fellow's procession. We have no quarrels with the optometrists but would not actively support their anti-advertising bill. Enactment of the bill would have accomplished nothing more than can be accomplished through the courts at the present time.

I regret that the time was not ripe to introduce a compulsory vaccination bill. Preliminary work on the bill was far from adequate. Members of the legislature who had offered to sponsor the bill withdrew their support and there was not enough support in either of the health committees to insure their sponsorship. A canvass of the membership of the House by the chairman of the committee proved definitely that it would be vigorously fought by influential members and that it had no enthusiastic support. Adequate sponsorship was entirely lacking. House File 300, a bill to recodify, modify, and rewrite all of the school laws of the State, consisting of 437 pages, was considered by the House for about three weeks, and a portion of it was passed and subsequently defeated in the Senate, which resulted in no legislation on this subject. Section 636 of this bill provided as follows:

"Smallpox and diphtheria epidemics. When in its judgment (State Board of Health) any epidemic of smallpox or diphtheria assumes dangerous proportions in any school or in any area served by a school, the state board of health may require that every child may be excluded from school until he can produce satisfactory evidence that he has been vaccinated against smallpox, in the case of smallpox, or inoculated against diphtheria, in the case of diphtheria, within the previous five years, provided, that no child shall be excluded who can produce satisfactory evidence of immunity to such diseases as a result of having had them preceding the date of the epidemic."

An amendment by Representative J. Colburn of Shelby County was filed to strike this section. When Colburn's motion was presented there was no debate and the motion passed by an overwhelming voice vote. There were two or three "no" votes and that action spelled the finish of this proposal. This action indicates the lack of support for the proposal and demonstrates that, had a separate bill been introduced, there would have been insufficient support to pass it. Do not be surprised if national legislation covering this subject may be enacted before the next session.

The trend of medical legislation in Iowa is definitely toward a conservative appraisal of the vast number of problems which are engaging the medical profession today, to hold the gains we have made, and to avoid unnecessary and harmful legislation. The Child Welfare bill will result in much good, at least it opens the door to federal aid.

To summarize, the trend of federal medical legislation is to draw a sharp dividing line between preventive medicine, including the vast public health problems, and curative medicine. The former will be taken over by an expanded United States Public Health Service and the latter work should be cared for by the physicians. However, there is the grave danger that by means of step-by-step legislation the physicians will soon find themselves involved in a comprehensive federal supervised Social Security Plan which will be under political control, with all of its unlimited cost and inefficient service.

The states are endeavoring to fortify themselves with efficient, constructive laws, many of them to enable the acceptance of grants-in-aid, and to resist the constant and insistent onslaught of the cults.

SOCIETY PROCEEDINGS

Butler County

The Butler County Medical Society began in June to hold monthly meetings, with papers and discussions by its members. The meetings, which are held in Allison, open with a 6:30 p. m. dinner.

Frank F. McKean, M.D., Secretary

Hardin County

The Hardin County Medical Society held its regular monthly meeting Tuesday, August 31, at the Princess Cafe in Iowa Falls. Following dinner at 6:30 p. m., F. Harold Entz, M.D., of Waterloo, spoke on Pyelitis in Pregnancy.

William E. Marsh, M.D., Secretary

Keokuk County

Members of the Keokuk County Medical Society met in Sigourney Friday evening, August 20, at which time a scientific recording on Chest Injuries by Jerome R. Head, M.D., of Chicago was presented to the Society.

Wapello County

The Wapello County Medical Society will open its series of fall meetings Tuesday evening, September 21. The scientific program for the evening will include the film entitled "Immunization Against Infectious Diseases," by Charles F. McKhann, M.D., and Harry A. Towsley, M.D., of the University of Michigan Medical School in Ann Arbor, Michigan.

PERSONAL MENTION

Dr. **Henry W. Clasen**, formerly of Dike, has located in Cedar Falls to take over the practice of Dr. Martin G. Ericsson, who has recently been commissioned a captain in the Army of the United States.

Dr. **Frederick L. Barnes** of Oskaloosa has retired from active practice because of ill health. He will continue to make his home in Oskaloosa.

Dr. **Wendell L. Downing** of LeMars spoke before the Rotary Club of Marcus at its luncheon meeting Tuesday, July 20. Dr. Downing discussed new developments in the medical field and told of the part they are playing in the war today.

Dr. **Arthur L. Blome** has located in Ottumwa where he will devote his time to the general practice of medicine with special attention to obstetrics. For the past eleven years Dr. Blome has served on the staff of the University Hospitals in Iowa City.

Dr. **Edward J. Van Metre** of Tipton has retired from the active practice of medicine. He plans to remain in Tipton.

Dr. **Murry L. McCreedy**, formerly of Brighton, has recently announced his association with the McFarland Clinic in Ames. Dr. McCreedy has practiced in Brighton for the past twelve years.

Dr. **Karl R. Luthy**, formerly of Oskaloosa, has accepted the position of Medical Director of the Kentucky Ordnance Works, which is located near Paducah, Kentucky, and is operated by the Atlas Powder Company.

DEATH NOTICES

Campbell, Malcolm Samuel, of Binghamton, New York, formerly of Malvern, aged fifty-three, died August 17. He was graduated in 1915 from the Middlesex University School of Medicine in Waltham, Massachusetts, and at the time of his death had long been a member of the Mills County Medical Society.

Eckstein, John William, of Ryan, aged fifty-four, died August 7 following a long illness. He was graduated in 1916 from Northwestern University Medical School, and at the time of his death was a life member of the Delaware County and Iowa State Medical Societies.

Gray, Samuel Thomas, of Albia, aged seventy-seven, died August 12. He was graduated in 1889 from the State University of Iowa College of Medicine, and at the time of his death was a life member of the Monroe County and Iowa State Medical Societies.

Newland, Mark Allen, of Center Point, aged seventy-three, died July 27 after a long illness. He was graduated in 1892 from the State University of Iowa College of Homeopathic Medicine, and at the time of his death had long been a member of the Linn County Medical Society.

Stewart, Zella White, of Iowa City, aged sixty-five, died August 4 of a stroke following a fall in her home. She was graduated in 1904 from Cornell University Medical College, and at the time of her death had long been a member of the Johnson County Medical Society.

SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:05 p. m.
WSUI—Thursdays at 9:00 a. m.

September	8 - 9	Nervousness Charles F. Obermann, M.D.
September	15-16	Abdominal Pain Roy R. Jeffries, M.D.
September	22-23	Army Medicine Robert S. Shane, M.D.
September	29-30	Obesity Byron M. Biersborn, M.D.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WALTER L. BIERRING, Des Moines, Chairman
DR. HENRY G. LANGWORTHY, Dubuque, *Secretary*
DR. JOHN T. MCCLINTOCK, Iowa City
DR. MURDOCH BANNISTER, Ottumwa
DR. FRANK E. SAMPSON, Creston

Medical History of Woodbury County

WILLIAM JEPSON, M.D., Sioux City

PART II

(Continued from last month)

There was a lapse of half a century following the advent of the Lewis and Clark Expedition before the next medical man appeared in this country, in the person of Dr. Cook. The first settlement in Woodbury County was made south of Floyd's Monument in 1848 by William Thompson, and a town was platted there which was to be known as Thompsonville. The county was organized in his home in 1853, but the county seat was moved to Sergeant Bluff the same year by a vote of seventeen, nine of whom were Americans and the remainder French. The foregoing is given to indicate the size of the settlement.

Dr. John Cook, in 1854, appeared in charge of a party of surveyors to survey the townships of the county, following which he platted the site which is now Sioux City. He and a number of influential politicians of the state were interested in this townsite, and under the guidance of J. A. Jackson of Council Bluffs he promoted Sioux City's upbuilding. In the spring of 1855 there were two log cabins where Sioux City now stands, but the following year the number increased to about four hundred. Dr. Cook was appointed the first postmaster of Sioux City in the spring of 1865. The postoffice consisted of his hat; that is, he at first carried the mail received from incoming steamboats in his hat until distributed.

Dr. Cook was an Englishman by birth and was said to have been a graduate of Oxford and some medical school in London. He first settled in Illinois, and then in Council Bluffs, and later founded Sioux City. Owing to his business activities, his practice was greatly restricted until the later years of his residence here. He moved to St. Louis in the early eighties and remained there until his death some years later.

It was related that upon one occasion, when called to administer to a sick lady, he was asked upon leaving his opinion as to the outcome, to which he replied gruffly that what he had given the patient would either kill or cure her. Since the patient was improved the next morning, it may be presumed that the medicine received the credit and, incidentally, Dr. Cook who administered it. This may well have been true because those were days of heavy doses. Thus the following prescription was in common use:

℞ Calomel
Rhubarb
Sodii Bicarbonate aa gr. x
Sig. Taken at once as an evacuant

Dr. A. M. Hunt located in Sioux City in 1856 and practiced here continually until the outbreak of the Civil War, except for a year or two spent in Colorado. Upon the outbreak of the Civil War he returned to his old home in Indiana, enlisted in her military forces, and served during the war as surgeon in one of her regiments. Following the war he returned to Sioux City and resumed his medical practice, dying here in the early seventies.

Since Dr. Hunt was greatly interested in educational activities, he became a member of the School Board and for years served as its president. As such he guided the educational activities of that early and formative period. One of Sioux City's schools was named for him.

He left three sons, one of whom graduated from the Annapolis Naval Academy and later became a distinguished civil engineer. Following World War I he was one of a commission of three appointed by our Government to make appraisal of mining and other properties in the war zones of Europe. The careers of the other two sons is not known. The daughter, Nina, taught in the public schools for years, until she married Attorney T. F. Conniff, a brother of Dr. Robert E. Conniff, prominent in medical activities.

Dr. J. J. Saville located in Sioux City about 1857. In 1859 he went to Colorado where he remained until about 1870 when he returned to Sioux City. While in Colorado he enlisted and served as a surgeon in one of the regiments. Soon after his return to Sioux City he was appointed Indian Agent at the Red Cloud Agency. Following this service he took up his residence in Omaha.

Doctors Hunt and Saville were associated for a time.

Dr. F. A. Willmans or Wilmans located in Sioux City in 1857 and continued his practice here until the Civil War when he joined the army. His subsequent history is unknown. An uncle of Mr. Spencer Lewis (from whom I have obtained much of the early history) is authority for the statement that Judge Brooks of the South Dakota territory had both legs so badly frozen in a blizzard that amputation became necessary. This was done by Dr. Willmans by the use of a bowie knife and a carpenter's saw. The uncle of my informant, Spencer Lewis, furnished the saw. There is, of course, nothing remarkable about this, except that it might be to those who cannot conceive of any operative procedure being accomplished unless surrounded by all the appointments and instruments of a modern hospital. The writer can bear testimony to the fact that the instruments were adequate for the services needed, since he has knowledge of a surgeon who, being called in consultation to see a patient at night during a blizzard, found the patient with a distended suppurating gallbladder. Since he was without any instruments, he proceeded to expose and drain the gallbladder with what was at hand; namely, a razor, cambric needles, and cotton thread. Luckily the attending physician had a one pound can of ether. Another somewhat similar situation occurred in a sod house with a kerosene lamp, scissors instead of razor, and a gangrenous appendix. Yet another instance of utilizing what is at hand: A baby nine months old was suffering with an extreme abdominal distention much larger than its head. A distended bladder was ruled out. There was no catheter at hand. A fine hairpin was secured from one of the women there, and when its two shanks were pinched together and properly curved and boiled, it served the purpose of a catheter. The distention was later disclosed to be a tumor which was formed by a distended right kidney due to a congenital absence of the ureter. The baby was, at that time, the youngest child to have had a nephrectomy and recover. The next youngest was eight years of age and was operated upon by Professor Roswell Park of Buffalo; the next, by Professor Rovsing of Copenhagen, was fourteen years of age.

Dr. Justus Townsend came to Sioux City in 1856 and remained but a few years, after which he located in Yankton, South Dakota. After remaining there for a few years, he returned to Springfield, Illinois.

Dr. S. P. Yeomans was one of Dr. Cook's associates in the organization and promotion of Sioux City's interests, and was the first registrar of the United States Land Office. He was a surgeon of the Seventh Iowa Cavalry during the Civil War, following which he located in Charles City, Iowa, where it is believed he engaged in his profession until his death.

Dr. Franklin Wixon came to the city with Dr. Cook and was interested with him in his real estate activities. He platted what is known as North Sioux City. He later moved to Yankton, South Dakota, to take up the practice of his profession.

Dr. D. F. Crockwell was an early settler in Sergeant Bluff, about the year 1868 or 1870, where he engaged in real estate activities and the practice of medicine. He soon thereafter moved to Utah and became active in the Mormon Church.

Dr. William Remsen Smith located in Sioux City in 1856, when he was about twenty-eight years of age, and practiced his profession very actively and successfully for eleven or twelve years. He was a graduate of the College of Physicians and Surgeons of New York City and at first located in Macon, Michigan. He finally moved to Sioux City where he practiced until about 1878, when he retired from active practice. Dr. Smith was active in all civic activities of the city. He was chairman of the Vigilance Committee at the time of the Indian outbreak in August, 1862, having organized a company of mounted riflemen which was posted and ready for service until relieved by Government troops. At about this time he was Government Surgeon and soon thereafter was commissioned by Governor Kirkwood to proceed to Vicksburg to inspect the Iowa troops then encamped before that city.

In 1863 he was appointed Surgeon of the Board of Enrollment of the Sixth Congressional District, and for years after the war served as Surgeon of the United States Pension Board. From 1865 to 1878 he served as receiver of public moneys (except for a brief period during President Johnson's administration) of the United States Land Office in Sioux City. He was elected Mayor of Sioux City in 1863 and again in 1871. In 1878 he served as one of Iowa's Commissioners to the Paris Exposition. He was one of the organizers of the Unitarian Church in the city in 1885.

He acquired and lived upon a beautiful tract of eighty acres within the city limits, which was

platted in 1886 as Smith's Villa and is now one of the city's most beautiful residential districts. Of eight sons, two are living; namely, Milton P. Smith, now city commissioner of public property and parks, and R. H. Burton Smith, a practicing attorney.

Doctor Smith died July 1, 1894; his widow survived until July, 1926.

From the time of the location in this city of Dr. Beggs in 1867, Dr. J. M. Knott in 1872, and later Drs. Guyton and Bergen, the city and county had competent medical and surgical services for those who cared to employ them. However, this was a period when homeopaths, eclectics, physiomedicos, and other cults vied with the regular profession for public favor. Regular doctors (then called allopaths by the irregulars) of medicine and surgery at that time had little to offer their patients, except that which was based upon empiricism, which in the light of the present day would not be considered as scientific or contributing much toward recovery, since the rôle which bacteria played as causative agents of disease and infection of wounds was unknown, or if suspected, then only by a few investigators scattered throughout the world. In support of this statement there follow the views and teaching of one of the foremost teachers of that period, N. S. Davis, A.M., M.D., LL.D., Dean, Professor of Medicine and Clinical Medicine, Chicago Medical College, Chicago, Illinois. He was a member of the Illinois State Microscopical Society. In his lectures to his classes, published in 1884, he has the following to say relative to the etiology of disease: "The most superficial observer knows that there is habitually a wide difference between the character of diseases prevailing during the high temperatures of summer and the low temperatures of winter. The influence of heat in increasing the susceptibility and lessening the vital affinity or tonicity of living structure is as apparent as is the power to lessen the affinity by which the atoms of organic matter are held together."

Many facts point to an intimate relation between extreme changes in the ozone, heat, electricity and aqueous vapor of the atmosphere and the production of such diseases, as in influenza, catarrh, rheumatism, and cholera, and there is much need of further careful investigation in this direction.

The second division of the external causes of disease, consisting of agents not naturally entering into the composition of air, water or food, but capable of being mixed with one or more of these and imbibed into the system through the same channel, arise mostly from the disintegration and decay of organic matter, both animal and vegetable. Hence, from a remote period in the history of medicine they have been styled miasms, idiomiasms when the product of animal or animal excretions, and koinomiasms when from the decomposition of vegetable matter. Until a comparatively recent period those deleterious products were generally regarded as inorganic, gaseous or chemical compounds, although so subtle and attenuated as to be ever eluding the best directed efforts of the chemist to isolate and examine them.

By a few, however, like Copeland and Holland of Europe and J. K. Mitchel in America, they are regarded as organic living germs, either vegetable or animal fungi or animalculae, and since the general use of the microscope in medical investigations, the tendency to regard all the deleterious products of the decomposition of organic matter as organized microscopic germs capable of self-propagation and free diffusion in connection with aqueous vapor of the atmosphere has greatly increased throughout all ranks of the profession. Still there is very little agreement among the various observers and the whole subject needs more extended and patient investigation.

In all our researches with the microscope concerning the nature of morbid causes, great care is required lest we mistake the mere product or results of a morbid action for the causes.

For instance, if we examine the surface of a sore upon the skin, or of an ulcer in the mucous membrane of the mouth and find it covered with fungi or vegetable germs, it does not necessarily follow that such fungi were the cause of the diseased spot in either place. Neither does it follow as a legitimate deduction that certain violent epidemic diseases as cholera, for example, arise from organic germs merely because they have been seen in the excretions.

Perhaps there is no topic embraced in the domain of medical literature concerning which we have on record a greater diversity of opinions than those concerning the etiology of typhoid fever. Some few claim, with much positiveness, that the disease is spread by a contagion emanating from the body of the sick sufficient to infect the surrounding atmosphere.

Until a comparatively recent period, much the larger number of writers and eminent observers simply claim that the cause of typhoid fever was a poison or class of poisons produced by accumulation of animal matter or excretions either in the confined air of dwellings or the buildings, or in moist soils, and capable of impregnating both air and water. This supposed poison was called idiomiasms to distinguish them from the poisonous product of decomposing vegetable matter called koinomiasms or, commonly, malaria. But since the application of the microscope to medical in-

vestigations and the discovery of various disease producing germs, it has been assumed by nearly all of our recent writers that the essential cause of typhoid fever is an organic germ of specific character propagated chiefly, if not exclusively, from the intestinal evacuations of those sick with the disease.

And we are assured by these authors that the disease never originates in any house or locality until the specific germs have been introduced from some previous case.

It is my duty, however, to caution you against receiving such positive assertions with entire confidence. Indeed, we have no direct or positive evidence that this much talked of typhoid germ has any existence, except in the human imagination, for no one has yet succeeded in isolating and satisfactorily identifying it, either with the microscope or chemical apparatus.

Regarding the etiology of diphtheria, he has this to say: "It is capable of spontaneous development and consequently does not depend for its production and spread upon any specific contagious germs or virus generated in the virus of the sick."

Intermittent or malaria fever—the real nature and origin of the specific cause of periodic fevers is still a mystery. Quinine, etc., were used.

Inflammation in the region of the cecum was recognized as typhlitis and perityphilitis (the appendix not being mentioned) and were treated by heroiv, often repeated enemas, abdominal stupes and anodynes (morphine or laudanum). The use of cathartics was restricted by Dr. Davis, but generally employed by the profession laboring under the impression that the condition was due to cecum impaction. He states that he had met with many of these cases of perityphlitis, but in only one instance under my own care has the disease proceeded to a fatal termination. This was the case of a young man attacked with the disease in the usual form, but who did not come under my care until the end of the first week of its progress when suppuration had already taken place. I proposed an early incision, but his own timidity and that of his mother caused it to be postponed from day to day, longer than was judicious. At the end of the second week it was opened and discharged freely of pus and later bowel contents. He died three months later of asthenia.

I am sure that many physicians and surgeons of the present day would be happy to repeat equally favorable results, since the mortality rate from appendicitis has been steadily increasing, if the United States Census reports can be relied upon.

Let the writer proceed to New York City which, on account of it being the portal of entry from Europe, should best mirror the state of medicine in this country at that time.

William H. Welch, the nestor of American Pathology, upon returning to New York City in 1878 after spending several years in the study of pathology in Germany, found no pathologic laboratories there. He established the first one in this country under the shelter of Bellevue Hospital College, spending about $2,500.00 on its equipment. It consisted of three rooms, provided with kitchen tables and six somewhat antiquated microscopes. This was the first bridge to span the gap between the newly developed and advancing scientific medicine of Europe and this country. Bacteriology was not a part of the course, although a few select students were instructed in such limited knowledge of it as Welch had gathered while in Europe studying general pathology. Upon receiving his appointment to Johns Hopkins in 1884, he returned to Europe to perfect his knowledge of bacteriology.

The discovery by Koch of the bacillus of tuberculosis did not impress the leaders of the profession of this country, as evidenced by the remarks of that outstanding internist, Professor Loomis: "The bacteria theory, which so recently occupied the attention of medical men, especially in Germany, is rapidly being disproved and consequently is rapidly being abandoned."

Professor .Austin Flint, however, maintained an open mind and evidenced deep interest in the subject, probably fostered by Professor Welch, who was associated with him at Bellevue.

End of Part II

(To be continued)

THE PHYSICIAN AND MEDICAL CARE

(Continued from page 437)

standing committees on public health and welfare in both houses, the Senate and the House of Representatives, in order that all legislation pertaining to health and welfare can be adequately reviewed by committee members who are informed on problems of health.

In conclusion may I reiterate that we physicians are civilians; we are your neighbors, who share the same responsibilities, vicissitudes and enjoyments that you share. We are conscious of the fact that we act as servants of the public and accept the responsibility of preserving health and offering relief of those who are sick. We accept our responsibilities, but we plead with you to represent us, to exercise economy, to preserve free enterprise, to preserve state rights, and to preserve a free country and a home for our soldiers to come back to when this war is over.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ESSENTIALS OF SYPHILOLOGY—By Rudolph H. Kampmeier M.D., associate professor of medicine, Vanderbilt University School of Medicine; in charge of the Syphilis Clinic and visiting physician to Vanderbilt University Hospital; with chapters by Alvin E. Keller, M.D., and J. Cyril Peterson, M.D. The J. B. Lippincott Company, Philadelphia, 1943. Price, $5.00.

MEDICAL PARASITOLOGY—By James T. Culbertson, assistant professor of bacteriology, College of Physicians and Surgeons, Columbia University. Columbia University Press, New York, 1942. Price, $4.25.

WAR MEDICINE—Edited by Winfield Scott Pugh, M.D., Commander (M.C.) U.S.N., Retired; formerly surgeon, City Hospital, New York. Philosophical Library, Inc., New York, 1942. Price, $7.50.

THE 1942 YEAR BOOK OF GENERAL THERAPEUTICS—Edited by Oscar W. Bethea, M.D., professor of clinical medicine, Tulane University School of Medicine. The Year Book Publishers, Chicago, 1942. Price, $3.00.

DISEASES OF THE SKIN—By Oliver S. Ormsby, M.D., Rush professor of dermatology, University of Illinois, and Hamilton Montgomery, M.D., associate professor of dermatology and syphilology, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, Rochester, Minnesota. Sixth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1943. Price, $14.00.

MEDICAL MALPRACTICE—By Louis J. Regan, M.D., LL.B., member State Bar of California. The C. V. Mosby Company, St. Louis, 1943. Price, $5.00.

THE PRINCIPLES AND PRACTICE OF OBSTETRICS—By Joseph B. DeLee, M.D., formerly professor of obstetrics and gynecology, emeritus, University of Chicago, consultant in obstetrics, Chicago Lying-in Hospital and Dispensary, consultant in obstetrics, Chicago Maternity Center; and J. P. Greenhill, M.D., attending obstetrician and gynecologist, Michael Reese Hospital, obstetrician and gynecologist, associate staff, Chicago Lying-in Hospital, attending gynecologist, Cook County Hospital, professor of gynecology, Cook County Graduate School of Medicine. Eighth edition, entirely reset. W. B. Saunders Company, Philadelphia, 1943. Price, $10.00.

NEUROSURGERY AND THORACIC SURGERY, Military Surgical Manuals Volume VI—Prepared and edited by the Subcommitttee on Neurosurgery and Thoracic Surgery of the Committee on Surgery of the Division of Medical Sciences of the National Research Council. W. B. Saunders Company, Philadelphia, 1943. Price, $2.50.

SYNOPSIS OF PATHOLOGY—By W. A. D. Anderson, M.D., assistant professor of pathology, St. Louis University School of Medicine; pathologist, St. Mary's Group of Hospitals. The C. V. Mosby Company, St. Louis, 1942. Price, $6.00.

GYNECOLOGY—By Lawrence R. Wharton, M.D., associate in gynecology, The Johns Hopkins Medical School. W. B. Saunders Company, Philadelphia, 1943. Price, $10.00.

BLOOD GROUPING TECHNIC—By Fritz Schiff, M.D., late chief of the department of bacteriology, Beth Israel Hospital, New York; and William C. Boyd, Ph.D., associate professor of biochemistry, Boston University School of Medicine. Interscience Publishers, Inc., New York, 1942. Price, $5.00.

MANUAL OF FRACTURES, Treatment by External Skeletal Fixation—By C. M. Shaar, M.D., Captain, Medical Corps, United States Navy, and Frank P. Kreuz, Jr., M.D., Lieutenant Commander, Medical Corps, United States Navy. W. B. Saunders Company, Philadelphia, 1943. Price, $3.00.

METHODS OF TREATMENT—By Logan Clendening, M.D., clinical professor of medicine, Medical Department of the University of Kansas, attending physician, University of Kansas Hospitals; and Edward H. Hashinger, M.D., clinical professor of medicine, Medical Department of the University of Kansas, attending physician, University of Kansas Hospitals, attending physician, St. Luke's Hospital, Kansas City, Missouri. Eighth Edition. C. V. Mosby Company, St. Louis, 1943. Price, $10.00.

FUNDAMENTALS OF IMMUNOLOGY—By William C. Boyd, Ph.D., associate professor of biochemistry, Boston University School of Medicine. Interscience Publisbers, Inc., New York, 1943. Price, $5.50.

NASAL MEDICATION, A Practical Guide—By Noah D. Fabricant, M.D., associate in laryngology, rhinology, and otology, University of Illinois College of Medicine. The Williams & Wilkins Company, Baltimore, 1942. Price, $2.50.

BOOK REVIEWS

INDIGESTION: ITS DIAGNOSIS AND MANAGEMENT

By Martin E. Rehfuss, M.D., professor of clinical medicine, and Sutherland M. Prevost, lecturer in therapeutics, Jefferson Medical College, Philadelphia. W. B. Saunders Company, Philadelphia, 1943. Price, $7.00.

This excellent textbook is written by one who for the past thirty years has been in active practice as a gastro-enterologist. He assumes that the reader has been grounded in the fundamentals and initiates him into the practical side of the problem of indigestion.

The first portion of the book is devoted to the diagnostic angle, stressing the importance of a well-taken history and careful physical examination. Accessory laboratory procedures, including thorough x-ray examination, gastric and duodenal analysis (to which the author has contributed the most satisfactory tube) and finally gastroscopy and gastrophotography are clearly described.

The chapters following discuss both the functional and organic forms of indigestion, such as peptic ulcer, malignancy, and the biliary tract type of indigestion. The author goes into great detail in outlining the treatment for each type, including the eradication of causative factors, diet, psychotherapy, and medications.

There are short chapters on vitamins, calories, and modern wartime problems in indigestion. All of the common materials of diet are discussed as to composition, digestibility, and essentiality. The concluding chapter is more or less a resumé of the particular diet applicable to each form of indigestion, as classified etiologically.

This well-presented subject matter is accompanied by illuminating diagrams, useful prescriptions, and diet charts.

I highly recommend this volume to the profession. It contains a wealth of practical information of particular interest to the general practitioner because of the prevalence of indigestion during wartime.

A. E. M.

DISEASES OF THE BREAST

By Charles F. Geschickter, Lieutenant Commander, Medical Corps, United States Naval Reserve, director of the Francis P. Garvan Cancer Research Laboratory; with a special section on treatment in collaboration with Murray M. Copeland, M.D., instructor in surgery, Johns Hopkins Medical School. J. B. Lippincott Company, Philadelphia, 1943. Price, $10.00.

This volume of 800 pages with 593 illustrations is an excellent example of a modern medical publication, and both the author and the publisher can be proud of it. Literally, it considers all the diseases of the breast in the male and in the female, from conception until death. It does so in a fascinating manner and is a source of exact information on not only the more common diseases of the breast, but also of the unusual conditions for which one generally must search through periodic literature. A complete bibliography at the end of each chapter points the way to pertinent collateral reading. The index which fills twenty-seven pages indicates the comprehensiveness of the subject matter and is so arranged that all desired subjects are easily located in the text.

In the preface the author states the volume was written in order to bring up to date, in one volume, the recent advances made in our knowledge of the breast and its diseases by different groups of specialists interested in these problems. The specialties include surgery, radiology, obstetrics and gynecology, pathology, endocrinology, and laboratory technology. In its preparation the author utilized not only the data from patients seen in private practice and on the surgical wards of the late Doctor Dean Lewis of Johns Hopkins Hospital but also that obtained by the study of the case histories, specimens and follow-up studies recorded in the Surgical Pathological Laboratory of Johns Hopkins by Dr. Bloodgood and his predecessors, Drs. Halsted and Welch. The text indicates that the author took full advantage of his opportunities and it bears the mark of excellence associated in the minds of the American medical profession with Hopkins publications.

The book is divided into seven main parts and these in turn are subdivided into thirty-five chapters which are further divided into twenty-three printed pages of subheadings. In general the clinical picture, pathology, diagnosis, treatment, and prognosis for each disease of the breast are considered. The 593 illustrations consisting of the photographs of patients or of gross specimens, photomicrographs, drawings and graphs enhance the text. Indeed, the illustrations are invaluable in bringing out the points raised by the author.

While the entire book is of great interest to the reviewer, the chapters on mammary hypertrophy; adenosis; chronic cystic mastitis or mammary dysplasia; mastodynia; and those on the experimental production of various diseases of the breast, including benign and malignant tumors, were most interesting. The discussion of the interrelationships of the endocrine glands, adenosis, chronic cystic mastitis, neoplasms and other conditions is most stimulating and indicates how far we have gone in obtaining a better understanding of these fundamentals in the last decade.

The treatment of malignant tumors of the breast as described by the author in collaboration with Copeland is conservative, and radical mastectomy is considered the treatment of choice. However, postoperative irradiation is considered valuable in the prevention of recurrences and in increasing the percentage of five year cures in the cases with axillary node involvement. The treatment of diseases other than malignancy is given adequate consideration, something that is much needed in these days in which breasts are needlessly sacrificed because of a failure to make adequate studies to determine a correct diagnosis before operation.

The reviewer has only praise for this book and wholeheartedly recommends it to the entire medical profession. To the family physician, in whose judgment the fate of many women with disease of the breast rests, it is a complete and practical source of correct information. It is, in truth, a volume which should be on the desk of every doctor who is interested in the diseases of the breast.

F. P. McN.

THE PRINCIPLES AND PRACTICE OF WAR SURGERY

By J. Trueta, M.D., formerly director of surgery, General Hospital of Catalonia, University of Barcelona; assistant surgeon, Wingfield-Morris Orthopaedic Hospital, Oxford; acting surgeon-in-charge, accident service, Radcliffe Infirmary, Oxford. The C. V. Mosby Company, St. Louis, 1943. Price, $6.50.

This is one of the few books available by an author who has actually had a recent, large experience with war wounds of all kinds under battle conditions. Sufficient time has elapsed since the Spanish War for an adequate evaluation of end results. The original skepticism has been converted to acclaim since other workers, especially English surgeons, have now obtained similar results.

This treatise summarizes the surgical experience of a man who has elaborated on the principles originally laid down by Winnett Orr to revolutionize the treatment of war casualties. Mortality and morbidity rates have been greatly reduced and some of the problems of transportation simplified. The extensive use of plaster after adequate wound excision has now become established in war surgery.

Twenty-six chapters and four hundred pages are contained in this volume. Wound healing, wound excision, chemotherapy, regional surgery, and plaster technic are a few of the subjects elucidated in a masterful manner. Detailed methods of the pattern plaster technic and its importance in handling large numbers of casualties receive emphasis. Many il-

lustrations picture this readable text throughout. An excellent bibliography is also given.

This volume should be a part of every war surgeon's library. It stands as a monument to a master surgeon and keen observer. I recommend it to you with great enthusiasm. J. B. P.

ELECTROTHERAPY AND LIGHT THERAPY

By Richard Kovacs, M.D., professor of physical therapy, New York Polyclinic Medical School and Hospital. Fourth edition, thoroughly revised. Lea and Febiger, Philadelphia, 1942. Price, $8.00.

The fourth edition of this book has been thoroughly revised in order to bring it up to date with regard to modern vacuum-electronic devices and new methods of electric shock therapy in mental conditions. Those methods which are important in the treatment of disability following war injuries are fully explained.

The author's desire to present a thorough and comprehensive view of the therapeutic use of electricity and light most suitable for office employment by physicians has been accomplished in an excellent manner. E. M. G.

MANUAL OF INDUSTRIAL HYGIENE and Medical Service in War Industries

Issued under the auspices of the Committee on Industrial Medicine of the Division of Medical Sciences of the National Research Council. Prepared by the Division of Industrial Hygiene, National Institute of Health, United States Public Health Service. Edited by William M. Gafafer, D.Sc. W. B. Saunders Company, Philadelphia, 1943. Price, $3.00.

At the Industrial Health meeting in January, 1941, it was pointed out that due to the rapid expansion of industry there was a marked shortage of industrial physicians, industrial engineers, and industrial hygienists. Also, at the January, 1942, meeting the shortage was still acute. In spite of the expanded teaching facilities in the different institutions it was difficult for men desirous of doing industrial health work to secure proper training.

It was pointed out that this was probably due to the fact that the urgent demand for industrial physicians and engineers in the military forces had served to deplete the number of men who were trained in these different fields. Therefore, in order to compensate for the lack of opportunity and shortage of teaching personnel, the committee decided through collaboration with leading men in the different fields, such as full-time public health physicians, to prepare a thesis which would help men who were called upon to fill in the gaps in our industrial centers. Therefore, this material now is in book form under the title "Manual of Industrial Hygiene," edited by William M. Gafafer, D.Sc.

This book is recommended to any physician who is doing full-time or part-time industrial medicine, as well as to physicians who are doing compensation work. It is an excellent reference in fields of contact allergy and numerous other industrial hazards in the proper handling of their prevention. J. E. R.

A MANUAL OF CARDIOLOGY

By Thomas J. Dry, M.D., assistant professor of Medicine, University of Minnesota (Mayo Foundation); consultant in section on cardiology, Mayo Clinic. W. B. Saunders Company, Philadelphia, 1943. Price, $3.00.

This three hundred and ten page book is a valuable contribution to the literature on cardiology. The author first discusses the normal heart, then follows with the important practical points in physical diagnosis. A comprehensive selection of electrocardiograms illustrating the normal and abnormal cardiac problems is included. The last part of the volume deals with the various disease conditions most commonly associated with the heart.

Throughout the book emphasis is directed toward brevity, yet sufficient detail is included to be of value to the physician who desires a quick reference. G. E. M.

THE YEAR BOOK OF OBSTETRICS AND GYNECOLOGY

Edited by J. P. Greenhill, M.D., professor of obstetrics and gynecology, Loyola University Medical School, Chicago; professor of gynecology, Cook County Graduate School of Medicine. The Year Book Publishers, Inc., Chicago, 1943. Price, $3.00.

This little volume of 650 pages brings together in one edition all the worthwhile publications in the field of obstetrics and gynecology for the year of 1942. For convenience, the book is divided into a section on obstetrics and a section on gynecology. The section on obstetrics includes a large amount of data of an investigative and statistical nature—grouped under the headings: pregnancy, labor, the puerperium, and newborn,—and a chapter containing a group of miscellaneous articles. These publications bring to the doctor the latest word in the field of maternal and infant care, and provide a vast fund of information, much of which has a practical application to the daily problems of obstetrics. Many of the articles are of outstanding value from the standpoint of their clinical application and undoubtedly will provide a source of information for the future obstetric texts.

The section on gynecology presents the latest information on such subjects as sterility, ectopic pregnancy, operative technic, menstrual disorders, endocrinology, and benign and malignant tumors.

Throughout the book the editor has discussed many of the publications and given the reader the benefit of his unusually wide experience in the field of obstetrics and gynecology. A.W.B.

The JOURNAL
of the
Iowa State Medical Society

VOL. XXXIII DES MOINES, IOWA, OCTOBER, 1943 No. 10

TROPICAL DISEASES IN IOWA IN THE POSTWAR ERA*

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Some of the tropical diseases will be introduced into this region following the war and there are certain facts which will enable us to evaluate the possibilities and probabilities of the ones which will be introduced and which may or may not become endemic. We must take into consideration the diseases confined to the tropics, those which are more prevalent in the tropics, but of which sporadic cases occur in the temperate zone, and those which prevail in both regions. It is important to discuss the probabilities of an increase in incidence of the latter two groups of diseases in addition to the introduction of the former group. We are all familiar with the fact that certain diseases were regarded as tropical in distribution by most of us only ten to fifteen years ago and they are now recognized to be fairly prevalent in the temperate zones. Bacillary dysentery and amebiasis are the outstanding examples. Other diseases generally regarded as foreign to this area, such as malaria, endemic typhus, certain other rickettsial diseases, and intestinal parasites, are encountered occasionally.

The probabilities that a disease will be introduced depends upon a sufficient number of our armed forces encountering the disease during the war, and upon the nature of the disease. A disease with a relatively short incubation period and of acute nature without relapses or carriers will certainly not be brought home by our returning troops. On the other hand, diseases with long incubation periods, with tendencies to relapse, with long latent or mildly chronic periods, or with tendencies for carriers to develop will most likely be brought home. The fact that a disease is introduced into an area does not indicate that it will become endemic or spread. The factors which determine whether or not a disease will become endemic once it is introduced into an area are the climatic conditions in certain cases, the presence of suitable vectors in sufficient numbers in other instances, and native animals which will act as reservoirs or intermediate hosts in others. In addition, the degree of sanitation and level of personal hygiene will be a tremendous factor in some diseases. It is not within the scope of this report to discuss all diseases which may increase in incidence or be introduced into this area, but the probabilities regarding some of the more important ones and groups of others will be presented.

Malaria is the scourge of the tropics, but it overlaps into the temperate zones. In the past it was endemic in this country as far north as the southern provinces of Canada and more recently sporadic outbreaks have occurred as far north as New York, Michigan, and Minnesota. A few cases are encountered in Iowa each summer. The disease may be an extremely hazardous one and in the past millions of people have succumbed to it, and the health, efficiency, and productivity of billions of others have been impaired. It is hyperendemic in certain areas where our troops are stationed, and the high incidence among members of some of our armed forces is general knowledge. The nature of the disease makes it almost certain that some of our troops will harbor the organisms in a latent state and that relapses will occur after they have returned home. The chances that these organisms will be transmitted to other members of our nonimmune population must be considered. The cold winters will not eradicate it, because man acts as the reservoir for the Plasmodium and can harbor it during the winter. The warm and moist summers of this region produce favorable breeding conditions for mosquitoes and suitable anopheline vectors can spread it widely. Two varieties of anopheline mosquitoes, the Anopheles punctipennis and Anopheles quadrimaculatus are widespread throughout the state according to a report in 1941 by Rowe.[1] Although these two species comprise only a small percentage of the total mosquito popu-

*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.

†From the Department of Internal Medicine, State University of Iowa College of Medicine, Iowa City, Iowa.

lation of the state,[2] they are present in sufficient numbers to be a real potential danger. With the introduction of the causative agents and the presence of suitable vectors in sufficient numbers, it is almost certain that malaria will increase in incidence. The species of the Plasmodium which we will encounter will depend upon the ability of each to persist in a latent state; the falciparum may persist for as long as a year, vivax for as long as three years, and malariae much longer. It appears probable that all three of the common species will be encountered and there is the possibility that Plasmodium ovale may be present also.

Bacillary dysentery has been recognized in Iowa for several years[3] and, therefore, we must consider the possibilities of an increase in incidence. It is known as a war disease because of its great prevalence under such circumstances. In spite of the tremendous advancement in sanitation in armies during the past forty years, its incidence has not been reduced. Typhoid and paratyphoid infections have been practically eliminated by vaccine immunization, but a vaccine has not been developed for bacillary dysentery. The nature of the disease is conducive for its distant transfer. Approximately 5 per cent of the acute cases become chronic[4] and probably 4 to 7 per cent will become carriers of the organisms.[5] The bacilli are discharged in the stools sporadically in both chronic and carrier states. It will be practically impossible, therefore, to ascertain the frequency of carriers and mildly chronic cases among returning troops. The organisms are transmitted by fecal contamination of food or water. Therefore, climatic conditions, vectors, intermediate hosts and animal reservoirs are not factors in its endemicity. On the other hand, the degree of sanitation and personal hygiene are important factors. An increase in sporadic cases may be expected, but the high degree of sanitation and the systematic examination of food handlers will probably prevent it from becoming extremely prevalent.

Plague has one of the most dramatic histories of any disease and it is highly endemic in certain tropical regions. It is generally agreed that the primary focus was in India, but as it has spread over the world secondary foci have developed. The disease is one of rodents and the rat is the usual victim, but other rodents are subject to the infection. The rat flea is the usual vector and the tropical rat flea, Xenopsylla cheopis, is the more common one. It can be transmitted, however, by the common rat flea, Ceratophyllus fasciatus, of the United States and Europe, but this flea rarely attacks man. The human flea, Pulex irritans, is common in this country and may be a good vector. In addition, the tropical rat flea is present in Iowa according to Roudabush and Becker.[6] Epizootics of the disease occur in rodents, and it is called to our attention only when a sporadic case or an epidemic appears in man. Meyer[7] reports that the disease is endemic in twelve of our western states and that it is definitely present in certain states east of the Rocky Mountains. Becker[8] has previously called attention to the possibility that the disease may spread into Iowa. Man is not likely to obtain the infection from another person except in the pneumonic type in which droplets from the respiratory tract may be the medium of transfer. The disease could become endemic, therefore, once it was introduced into this area. The nature of the disease, with the short incubation period, without relapses or latency and without human carriers as far as is known, makes it extremely unlikely that it will be introduced by troops returning from the war. We should not forget, however, that it may spread into this area through the wild rodents of this country.

Cholera is another scourge in certain areas of the tropics. In endemic regions from 6 to 20 per cent of the population may be carriers, but the Vibrio usually disappears from the stools of carriers and victims in approximately two months. Greig[9] reported that the organisms may be harbored in the gallbladder and be discharged periodically. Some of our troops stationed in endemic areas may become carriers and the disease might be introduced into this country through passengers by air transport. If introduced, it may become endemic. A warm, moist climate is the most conducive for its transfer, but the most adverse climatic conditions might not eradicate it. It is transmitted by fecal contamination either direct or through food or water, and is usually transferred from one community to another by carriers or persons with mild cases. The fact that bacillary dysentery, which is transferred in a similar manner, has persisted in this country suggests that cholera might likewise persist if it is introduced.

Yellow fever is another tropical disease with a very dramatic history. Its home appears to be in Africa, but other endemic foci have developed. The nature of the disease makes it improbable that it may be introduced into this country by human cases. Our troops will be exposed to the infection, but the fact that they will have been vaccinated before going into endemic areas may decrease the probability that the disease will become prevalent among them. The short incubation period, with an acute nature, and the fact that the disease is without latency or relapses and without carriers are against introduction of the disease into this area. Mild cases occur and are usually overlooked, but it is extremely unlikely that the victims would

be returned to this country and exposed to potential vectors during the stage of infection. Another method of distribution of the disease is through transportation of infected mosquitoes. The widespread use of air transportation makes this method of transfer a real danger. Every available precaution has been instituted to prevent these infected vectors and, in fact, all possible vectors of other diseases from being transferred from one area to another. However, should the disease be brought into this country, there is the possibility that it may become endemic. Mosquitoes other than the usual vector, Aedes aegypti, may harbor the virus and the occurrence of jungle yellow fever raises the possibility of animal reservoirs.

Dengue fever is another virus disease which has not been recognized to any extent in this state, but it has been prevalent in some of the southern states and has extended as far north as Philadelphia and Boston. The short incubation period and the acute nature of the disease without latency, relapses or carriers are against its being brought into this region from abroad. It may extend, however, from the southern states, and soldiers discharged from southern camps may return home with the disease. If this should occur, it is doubtful that it would become extremely prevalent. The Aedes aegypti mosquito is the usual vector, but it is probable that other mosquitoes can assume that rôle. Without human carriers or animal reservoirs, the disease would disappear during the winter and not reappear the following summer unless the infected mosquitoes were able to hibernate during the winter.

Of the dengue-like fevers very little is known. The Rift-Valley fever is an acute illness and as far as is known relapses do not occur nor have carriers been demonstrated. It probably will not be brought into this country, but if it should it may possibly become endemic. It is a disease of sheep, and epizootics have been reported in cattle, but the vector has not been definitely established. The phlebotomus or pappataci or sandfly fever is likewise an acute disease, and it is not likely to be brought into this country. The vector of this malady is a midge, the sandfly Phlebotomus papatasii, but this midge does not occur in Iowa.

The rickettsial diseases are not confined to the tropics, but are widely distributed through the temperate zones. Of this group, typhus fever has been the most dreaded. An occasional case of endemic typhus is seen in this region and the usual vector is the tropical rat flea, Xenopsylla cheopis. The endemic variety, however, practically never acquires an incidence of epidemic proportions. The epidemic type, on the other hand, is transmitted by the human louse, Pediculus humanus, and under lousy conditions it spreads rapidly. It is not likely to become prevalent among our armed forces because the latest improvements in delousing and every precaution to prevent widespread louse infestation are being employed. In addition, it is an acute disease and there are no known carriers. It is unlikely to be brought into this country, and if it should it probably will not become endemic. The disease was introduced into this country during the period of rapid immigration from Europe, but it has disappeared.

Rocky Mountain spotted fever is not apt to increase as a result of the war and the acute nature of its two related diseases, fièvre boutonneuse and South African tick bite fever, will probably prevent them from being introduced into this country.

Tsutsugamushi fever is another rickettsial disease and it probably includes "pseudotyphus" of Australia and "scrub typhus" of the Dutch East Indies. In Japan it is transmitted by a mite, Trombicula akamushi. The acute nature of the disease without latency or carriers will probably prevent it from becoming transferred to this country. If so, it is not likely to become endemic because there are no known vectors. Likewise the Australian Q fever which is transmitted by the tick, Haemaphysalis humerosa, will probably not be encountered. The American Q fever, on the other hand, may be encountered, not because of the war but because we have not recognized it in the past and it is transmitted by the tick, Dermacentor andersoni.

Amebiasis was regarded as a tropical disease until about a decade ago, when we became acutely aware of its presence.[10] The infestation of the population with the pathogenic organism, including those with and without clinical disease, has been estimated from 2 to 10 per cent. There are ample carriers of the organism in the population and returning troops are not likely to increase this percentage. The idea is becoming prevalent that the Amoeba themselves do not cause intestinal symptoms, but that secondary infection is the precipitating factor. It is possible, therefore, that our returning troops may bring back some foreign mildly pathogenic intestinal bacteria which will cause sufficient irritation to produce symptoms of amebiasis in persons with latent Amoeba infestation, but who have not previously exhibited clinical manifestations. An increase in amebiasis may occur, thereby, following the war.

The parasitic intestinal worms, hookworm, Ascaris, Strongyloides, whipworm, and seat or pinworm are not confined to the tropics, but they are of greater prevalence there. Some of our troops will return home with these parasites, but the adverse climatic conditions and high degree of

sanitation in this area excludes any widespread prevalence of them.

Of the spirochetal diseases only the European and tropical relapsing fevers and Yaws will be discussed. The European type is caused by Spirochaeta recurrentis and it is transmitted by the louse. We probably will not see any of this disease because of the same reasons presented under the discussion of typhus fever. Tropical relapsing fever, on the other hand, is transmitted by the tick, Ornithodorus moubata, and is caused by Spirochaeta duttoni. It is sometimes referred to as African tick fever. There are no known carriers and although relapses are common, the interval between them is relatively short and the disease probably would not be imported unnoticed. It should be borne in mind, however, that the disease has occurred in this country as close to Iowa as Oklahoma and Kansas. The vectors in this country have been ticks, Ornithodorus turicata, Ornithodorus hermsi and Ornithodorus parkeri. It is logical to predict that we will encounter this disease in the near future, but it will not be due to our returning troops.

Yaws, another spirochetal disease, is confined entirely to the tropics. According to Strong[5] it does not spread in temperate zones from cases occasionally introduced. A fairly large number of cases was introduced into this country during the early days of slavery, but the disease has apparently disappeared. In addition, Yaws rarely, if ever, occurs in the white race even when the individual is stationed in endemic areas, unless personal hygiene is degraded to that of the natives. We do not anticipate that many of our troops will contract the disease and those who do will be recognized and treated adequately before return to civilian life.

The diseases due to Trypanosoma include the African and South American varieties of trypanosomiasis and leishmaniasis. The African variety is generally known as the African sleeping sickness. The etiologic agents are Trypanosoma gambiense and Trypanosoma rhodesiense which are transmitted by the tsetse flies, Glossina palpalis, Glossina tachinoides, Glossina morsitans, and others. The distribution of the disease is confined to that of the tsetse flies, and although it may be transmitted mechanically by some other blood sucking Diptera, this method of transfer is extremely rare. Patients with African trypanosomiasis who have been observed in this country have obtained their infection in Africa. We may expect that some of our men will contract this disease and that a few cases may be encountered in troops returning home. We do not expect it to become endemic, because suitable vectors are not present.

The South American variety is caused by Trypanosoma cruzi, and it is widely distributed in Central America and the northern part of South America. The disease is usually chronic in adults and the chances are that it will be introduced into this area by persons returning from endemic regions. The "kissing bug," Triatoma magista, and Triatoma infestans are the usual vectors. Although no human cases have been reported in the United States, the Triatoma protracta in the southwestern part of this country and the Triatoma gerstackeri in Texas have been found to be naturally infected. These Triatoma extend as far north as Utah, but so far only those mentioned above have been found to be naturally infected. The ticks which have been infected experimentally include Amblyomma cajennense, Ornithodorus moubata, and Rhipicephalus sanguineus, and are found in Iowa according to Eddy and Joyce.[11] The data, however, were not sufficient to ascertain the extent of distribution in the state. The common animal reservoirs are the armadillo and opossum, but a species of bat was found to be naturally infected in Panama and another species of bat and a woodrat were discovered to have natural infection in California. We have vectors and possible animal reservoirs present in the state and it appears very probable that the disease might become endemic here. In addition, there is the possibility that it may spread up through the animal reservoirs and vectors from the south. The degree of endemicity will depend upon the prevalence of the vectors and animal reservoirs in this region.

Leishmaniasis occurs in two forms, the visceral and cutaneous. The former is commonly known as kala-azar and the latter as tropical, Aleppo, Bagdad, or Delhi boil. The vector has not been definitely established, although the Phlebotomus is strongly suspected and the dog has been held under suspicion as one of the animal reservoirs. It appears reasonable to predict that a few members of our armed forces will suffer from this malady and that a rare case may be encountered after demobilization of our troops. The disease has been introduced into new areas and cases have been observed in the United States in persons returning from endemic regions, but there has been no tendency for the disease to spread in these new localities.

The fluke infestations are caused by trematodes infiltrating into certain regions of the body. They include the blood flukes, Schistosomum haematobium, Schistosomum mansoni, and Schistosomum japonicum; the liver flukes, Clonorchis sinensis and Fasciola hepatica; the intestinal flukes, Fasciolopsis buski and Heterophyes heterophyes; and the lung fluke, Paragonimus westermanii. They are all

characterized by the fact that they require snails as intermediate hosts in their development. A few of our troops will contract the blood flukes which have free swimming cercariae, but they are not so likely to contract the others in which the cercariae encyst upon vegetation or in fish or in crayfish because they are not apt to eat these foods raw. These diseases are chronic and man may be infected for several months without his knowledge. It is almost a certainty that schistosomiasis will be introduced into the state. The intermediate host, the snail, in all of these diseases either ingests the eggs or the miracidium of the causative organism attacks it. After certain development within the snail, the cercariae break out and become free swimming. Those of Fasciola hepatica and Fasciolopsis buski encyst on aquatic vegetation, or those of Clonorchis sinensis encyst in fish and those of Paragonimus encyst in crayfish. The swimming cercariae of the blood flukes attack man when he wades or swims or bathes in infected water or drinks it. The possibility that these diseases will become endemic is remote. The miracidiae do not attack man; therefore, the snail host is necessary for the formation of the cercariae which do attack man. Our climatic conditions are not unfavorable for snails nor for cercariae of a non-human Schistosomum which causes dermatitis in certain of the Great Lakes states. It has not been definitely established that the North American species of Planorbis, which are different from those occurring in Africa, West Indies, and South America, will act as an intermediate host. Strong[5] and others, however, doubt that they are potential intermediate hosts. There is additional evidence to support this contention. Some of these diseases were probably introduced into the United States by slaves and they did not become endemic. It is generally agreed that the West Indies and South America became infected in this manner. Cases of schistosomiasis may be encountered in this area following the war, but they will undoubtedly be present only in persons who contracted it in foreign countries.

Filariasis includes a group of diseases due to certain nematodes which invade the connective tissue, lymph and viscera of the body. They include Wuchereria bancrofti, Wuchereria malayi, Dipetalonema perstans, Mansonella ozzardi, Loa loa, Onchocerca volvulus and Dracunculus medinensis. The first five of these diseases are characterized by the microfilaria appearing in the blood stream. In Onchocerca volvulus, the microfilaria are found only in the skin, eye, or cutaneous nodules. In Dracunculus medinensis the larvae or microfilaria do not appear in the tissues of man, but they are extruded from the female through an ulceration in the skin. All of these diseases are chronic and an individual may harbor the organisms for a year or more without his knowledge. It appears certain that these diseases will be brought into this area, but one cannot predict whether or not Wuchereria malayi and Wuchereria bancrofti will became endemic in this region. It is conjectured by some that Wuchereria malayi is transmitted only by the mosquitoes of the genus Mansonia and, hence, will not become endemic unless other unknown vectors are present. Wuchereria bancrofti, on the other hand, is transmitted by a great variety of mosquitoes of which Culex fatigans is a known vector. This mosquito is found in the southeastern part of the United States, but none of the known vectors have been found in Iowa. It is possible that some of the important mosquitoes in the state may be excellent vectors.

Dipetalonema perstans and Mansonella ozzardi are transmitted by Diptera of the genus Culicoides and the vector for Loa loa is the Chrysops. We may expect these diseases to be introduced into this region. Related members of Culicoides and Chrysops are fairly numerous in the state. The possibility that these diseases will become endemic cannot be eliminated until these possible vectors are thoroughly investigated.

Onchocerca volvulus is endemic in certain areas of Central America and has shown a tendency to spread northward. It is extremely likely that this disease will be brought into the state. It is transmitted by several species of a small, black fly of the genus Simulium. Several species of this genus are present in Iowa, but their availability as vectors has not been ascertained. Until this phase has been thoroughly investigated, the question that the disease will become endemic cannot be answered.

Dracontiasis or the "fiery serpent of the Israelites" or Guinea worm is caused by Dracunculus medinensis, and it might be brought into this area. The worms inhabit the tissues of the body and the pregnant female finds her way to the subcutaneous tissue where she becomes interwoven into the connective tissue. She apparently prefers the extremities and the foot or leg are the more common sites. Some local reaction occurs about the worm, but it is not until about time for the larvae to be passed that the skin lesion develops. The cephalic end of the adult female then approaches the surface of the skin and a vesicle forms which, upon rupture, reveals the prolapsed uterus of the parasite from which larvae are extruded. Some of these larvae find their way into streams or ponds where they attack Cyclops. They remain in the Cyclops until this small organism is ingested by man in his drinking water. Cyclops are present

in this region, but whether or not they will act as intermediate hosts is another of our unsolved problems.

SUMMARY

The available data have been reviewed to ascertain the probabilities that certain diseases confined entirely or partly to the tropics may appear or increase in this region following the war.

The data indicate that malaria, bacillary dysentery, and amebiasis may increase and that plague, cholera, dengue fever, American Q fever, tropical relapsing fever, African and South American trypanosomiasis, leishmaniasis, schistosomiasis, filariasis and dracontiasis have a good chance of being introduced into this area.

The evidence is against yellow fever, Rift-Valley fever, epidemic typhus, fièvre boutonneuse, tsutsugamushi fever, Australian Q fever, and Yaws being transferred into the state.

Of the diseases introduced plague, cholera, dengue fever, American Q fever, tropical relapsing fever, South American trypanosomiasis, schistosomiasis, filariasis and dracontiasis may have a chance of becoming endemic. Leishmaniasis and African trypanosomiasis, on the other hand, are not likely to become established.

Discussion

Dr. Irving H. Borts, Iowa City: Dr. Greene is to be congratulated upon the excellent paper he has just presented. These problems will not only be confronted in the postwar era but are now being encountered in increasing numbers in our soldiers at home on furlough to convalesce. During this past week I have had the opportunity to verify by microscopic means two specimens from cases of recurrent malaria among marines on furlough from Guadalcanal.

Recent information from medical officers stationed at Atlantic and Pacific Base Hospitals and Reception Centers for injured and ill servicemen, reveals that malaria is one of the greatest causes of disability among our armed forces. Other tropical diseases mentioned were leishmaniasis, schistosomiasis, filariasis, amebic and bacillary dysentery; these, too, may soon find their way into Iowa if they have not already done so, and may set up local foci of infection.

In our state we have many vectors and intermediate hosts capable of becoming infected and serving as reservoirs of tropical infections. We also have scores of insects, bugs, and water life which may serve as reservoirs of infections. There is little question among parasitologists that these latter offer definite hazards to our population.

It is quite probable that malaria, the scourge of the tropics, might likewise become the scourge of Iowa. It is well recognized by malariologists that malaria may simulate almost any disease in our medical category, and if we do not keep that in mind many cases will be missed. If we search the thin blood film for malarial parasites from early, treated and chronic cases, the laboratorian may be unable after prolonged search to find the parasites. The thick blood film about which you will hear much in the future is twenty to fifty times more efficient in demonstrating the malarial parasites. This is in reality a concentration technic, which requires a special staining procedure and the services of a laboratorian familiar with this particular procedure.

In view of our present information, the medical profession must give the tropical disease problem serious consideration. Schools of tropical medicine have been established in several parts of the United States for the training of medical officers and internists in teaching institutions. It is hoped that this training will soon be available to other civilian physicians. Our speaker has just returned from one of these excellent schools of instruction and will soon leave for several months training in the field, perhaps in Puerto Rico.

As Dr. Greene pointed out, we are and will be confronted with diseases of a tropical nature. As physicians and laboratorians, it will be necessary for each and everyone of us to become "tropical-disease-minded."

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TREATMENT OF INDUSTRIAL WOUNDS*

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At this particular period in the history of our country everything possible must be done in order to prevent industrial accidents and permanent disability. Every injured man needs and must be given immediate medical attention: the demand of industry, of the insurance companies, of the patient and of the physician is that the injured person be treated adequately and returned to his occupation

*Abstract of paper read before the Institute on Industrial Health, Mason City, June 25, 1941, sponsored by the Iowa State Department of Health and Iowa State Medical Society.

with a minimal loss of time and disability. The prevention of disability often rests on the physician who first attends the patient after the injury has been incurred. The surgeon who is called in consultation at a later date may find his aid limited by reason of avoidable complications, such as infection. Thus, if a man is injured in a factory or on a road and great quantities of foreign material or soil have been ground into the wounds, the important steps in his treatment are the control of hemorrhage and application of a sterile dressing, after which the physician immediately should transfer him to a place where facilities for proper treatment are available. Good results then will be obtained if the wound is prepared by immediate and thorough cleansing.

In consideration of the treatment of industrial wounds, it must be borne in mind that in these modern times there is not a great difference in the wounds sustained in civilian life, war wounds, and industrial wounds. A wound is a break in the continuity of tissue and may be superficial, as in cases of abrasions or lacerations, or it may be deep, such as a stab wound, fracture of the hip, or rupture of the spleen. In the treatment of wounds the surroundings and manner in which the injury was sustained are important. Thus, a wound may be the result of a burn of the skin by a piece of hot metal, which is sterile and requires only a clean dressing, whereas the wound sustained in a barnyard or on a battlefield in the presence of numerous pathogenic bacteria, especially gas and tetanus bacilli, would be treated in an entirely different manner. An illustrative case is that of a young woman who had received multiple large abrasions on the anterior portion of the body and extremities in an automobile accident in which she was dragged on the pavement. The skin had the appearance of being roughened by a piece of sandpaper, and dirt and debris had been rubbed into the injured regions. An antiseptic solution had been applied the night prior to our examination. The abrased surfaces of the skin were scrubbed with soap and water and a soft cotton material until all dirt had been removed. Several gallons of lukewarm water and a bland (white) soap were used. The wounds were dried and sterile gauze bandages impregnated with petroleum jelly (vaseline) were applied. Healing without infection or obvious scarring took place. It is our belief at the clinic that the thorough cleansing of fresh wounds with soap and water (in cases seen within two hours of the time of injury) is the most effective, economical, and satisfactory type of treatment, and I have used it for the past thirty years with eminent satisfaction.

I agree entirely with Koch[1] and others who have laid stress on the fact that the first important step in the treatment of a fresh wound is the preparation of the surgeon and his assistants, who should immediately put on masks. There is little doubt but that a fresh wound may become contaminated by nasal or oral discharge during the process of treatment. Essential rules may be stated for the treatment of these wounds; namely, control of hemorrhage and covering of the wound with sterile gauze, and the application of masks and gloves by the surgeon and his assistants, the gloves being washed or changed as often as deemed necessary during the process of cleansing. I believe that it is wise to apply sterile gauze to the wound first, then to prepare carefully the surrounding skin by using soap and water as mentioned. Although I prefer this method, I know that certain antiseptic materials also are valuable, and I am of the opinion that there are some advantages to be gained in varying the treatment somewhat in accordance with the circumstances in each case. There are cases in which soap and water may be used, while in others the use of benzine or ether may be required because of their solvent qualities in the removal of grease. After the skin about the wound is dry, tincture of merthiolate may be used. After the careful cleansing of the surrounding tissue and application of an antiseptic solution, the sterile gauze dressing is removed and the wound is inspected and cleansed; a careful search then is made for foreign material.

The most efficient method of doing this is to have large containers of normal saline solution or of dilute permanganate or Dakin's solution on hand. A stream of one of these solutions is kept running over the wound while it is being cleaned with a soft material, such as cotton, and with soap and water. This loosens the fragments of tissue in the wound and washes them away together with soiled material. The skin edges, when lacerated or frayed, are trimmed and debridement of tissue is carried out. Care must be taken so that no crevice is left which may contain foreign material. When a puncture wound is present, it should be enlarged so that every portion may be inspected carefully and the condition of the vital organs, the nerves, and the blood vessels may be ascertained. The next step in the treatment of a fresh wound is primary closure, which will give excellent results if the aforementioned procedures have been carried out meticulously (case 1).

Patients who have incurred wounds from gunshot and other explosives usually are given immunizing doses of tetanus antitoxin. Such wounds should be widely opened and careful dissection made in order to eliminate all foreign material, such as wads of paper, particles of clothing and

so forth, which may be lying deep in the tissue. If such an investigation is not carried out, it is difficult to determine whether foreign material is present in the wound or whether the vital organs are involved. While 1,500 units of tetanus antitoxin is an immunizing dose, in cases of severe trauma with contamination I believe large doses or 5,000 units may be given as the initial dose. The physician is wise to make a record when he has advised tetanus antitoxin and the patient or relatives refuse to have it administered. Many industrial surgeons rarely use tetanus antitoxin, but their patients are seen and treated at once in industrial medical dressing or operating rooms whereas the family doctor may not see the patient for hours.

A complete record of all accident cases should be made; this is of prime importance, especially in industrial cases. The time, place, the names of the witnesses and the events leading up to an accident should be recorded. It is essential that the physician know what type of treatment was carried out prior to the time he sees the patient and to know the time elapsing between the accident and the examination. The average industrial plant in this country has facilities for first aid treatment of the workers so that infection and its complications are being eliminated rapidly. Oftentimes witnesses are able to furnish the physician with facts concerning the accident which may be of great value in judging the type and degree of trauma; this is especially so in instances in which the patient is unconscious. I wish to emphasize the importance of the case record in these modern times when the employer, the insurance company, and the compensation board all expect the physician to furnish accurate statements concerning the accident sustained, the extent of injury, the diagnosis, the treatment, and the prognosis as to future disability. I feel that an accurate record is essential in all cases whether the patient has sustained a war injury, an industrial injury, or is seen in civilian practice.

In the agricultural section of the country, injury from a corn shredder is common. Frequently, extensive laceration and crushing of soft tissues are complicated by compound fractures or by traumatic amputation of a portion of a hand. Immediate institution of treatment is essential in an effort to prevent infection and in an attempt to save as much of the extremity as possible (case 2). Each year a number of patients are encountered who have sustained serious injuries in a wringer or crushing injuries in huge rollers of industrial factories (case 3).

The Carrel-Dakin method of treatment of infected wounds was one of the lessons gained from the World War of 1914 to 1918. This method has been discussed in another paper.[2] The results obtained have been the most encouraging in my experience. One of the important things to remember, however, is that the technic is most exacting, and in order that the method may be successful each dressing must be performed meticulously and under the most rigid aseptic conditions.

Today we are in the midst of a new experience; namely, the use of chemotherapy. Sulfanilamide and sulfathiazole are commonly used now and in my experience such treatment has led to most encouraging results. In cases of septicemia in which there is not definite localization of infection, the careful administration of one of the sulfonamide compounds to a point of tolerance is doubtless a life-saving method of treatment.

Two factors seem of the greatest importance in the treatment of septicemia encountered in these cases. The first is the selection of the proper drug to be administered, which must, of course, be based on the pathogenic bacteria associated with the infection. The oral use of sulfathiazole and sulfapyridine or the intravenous use of sodium salts proves most effective in infections from which staphylococci have been isolated. Sulfanilamide by mouth or subcutaneously in the form of an 0.8 per cent solution in saline solution is still the method of treating infections from hemolytic streptococcus at the clinic.

The second factor of importance is the adequacy of treatment. If concentrations are maintained at a high level and the drug continued until all signs of infection have subsided, the recovery rate is as high as 70 to 75 per cent in the cases of septicemia.[3] The local use of sulfanilamide and sulfathiazole placed directly into wounds either prophylactically or therapeutically has brought about gratifying results. Sulfapyridine has not been used locally in cases at the clinic. Sulfanilamide or sulfathiazole in powdered form may be introduced directly into wounds or even into fractures. No irritation to the tissues has resulted from this practice and concentrations are of no great significance. The standard 0.8 per cent solution of sulfanilamide may also be used for the purpose of irrigation. Several interesting cases have been reported in previous publications.[1 and 4] There is no doubt but that further studies over a considerable period of time will be necessary before the results or effectiveness of chemotherapy in all types of wounds is known.

The treatment of industrial wounds cannot be discussed without mentioning something about the often neglected factor of rest. Extremities which have been badly damaged naturally should be immobilized. Fixation in a plaster cast after pre-

liminary suturing often is a deciding factor in the result obtained since the restless movements of a patient in great pain might produce hematoma, bleeding, and finally infection, whereas an immobilized wound would have healed with primary intention. Furthermore, the use of heavy catgut or other heavy material in ligating and suturing a wound should be avoided. The smaller and finer the material used, with the aid of small needles, the better the result should be. Also, large soft dressings with a moderate amount of compression are useful adjuncts in obtaining primary healing. As I have already stated, when the wound is acute, that is, when the patient is seen within two hours of the time of injury, primary suturing may often result in healing. On the other hand, when the injury is of a longer duration, the surgeon probably would be wise in treating the wound by opening it widely (the method of Orr or Carrel-Dakin).

In cases of extensively lacerated and contused wounds, gas gangrene antitoxin and tetanus antitoxin are administered routinely at the clinic.

REPORT OF CASES

Case 1—The patient, a boy fifteen years of age, was seen within two hours of the time he sustained a gunshot wound of the right hand, wrist and arm. The physician in his home locality applied a primary dressing and immediately brought him to the hospital.

On admission the patient was brought directly to the operating room. The profuse bleeding was controlled. The wound was cleansed with soap and water and tincture of iodine was applied, after which the severely lacerated soft tissue was excised and the fracture of the fourth metacarpal bone reduced and the pieces held in place with chromic catgut. The wound was washed with hychlorite (a solution of chlorinated soda) and sutured. The surgeon attempted to save as much of the hand as possible.

Subsequently there was necrosis of tissue. Three weeks later the fourth and fifth fingers were amputated. Seven weeks later the hand was healed and there was good function of the thumb and of the index and middle fingers. If infection had developed, the patient probably would have lost entirely the use of the hand, and possibly amputation of the arm would have been necessary.

Case 2—A farmer, forty-three years of age, was seen shortly after he had sustained a crushing injury to the left hand and arm in a corn shredder.

On admission, the patient was brought directly to the operating room, where examination revealed multiple crushing injuries with traumatic amputation of the second, third, fourth and fifth fingers, compound fractures of the second and third metacarpal bones, and a deep wound on the palmar surface of the hand extending into the tendons. These were lacerated. The usual cleansing procedure was carried out and 1,500 units of tetanus antitoxin was administered. Debridement and reamputation of the fingers were performed and a splint was applied with the hand in dorsiflexion. Two months later the wound was healed completely.

Case 3—A laborer in a paper mill, forty-two years of age, sustained a crushing injury of the left hand when it was caught between rollers.

There were compound fractures with loss of skin about the wrist and loss of the index and middle fingers and a portion of the thumb. The patient had had treatment and skin grafting. At the time we saw him the contracture held the stump of the thumb in adduction, the fingers were stiff and a flexion contracture deformity was present. Also there was osteoporosis of the bones of the arm and hand, multiple fractures and a hard mass of fragments of bone attached to the third metacarpal bone.

The bony mass, consisting of portions of the phalanges of the second and third fingers, was excised. The thumb was separated by excising the scar tissue and then abducted; capsulotomy of the interphalangeal joint then was performed to correct the deformity. Skin grafts were applied to permit extension of the third finger and give a movable stump of the thumb. Physical therapy was given. Healing and improved function took place. It was decided that this patient had an 85 per cent loss of function of the left hand and wrist at the time his case was settled. The patient was seen recently, at which time he was feeling well and had returned to work.

SUMMARY

Steps in the treatment of injuries may be listed as follows: (1) control of excessive hemorrhage which, of course, is essential; (2) application of sterile dressing; (3) transportation of the patient to an institution where proper treatment may be carried out in an operating room; (4) preparation of the surgeon and assistants by putting on masks, rubber gloves, and so forth; (5) the cleansing of surrounding skin while the original sterile dressing is still in place; (6) removal of sterile dressing and examination of the wound for foreign material and injury to vital structures, such as nerves, blood vessels, and so forth; (7) extensive irrigation of the wound so that every particle of contaminated material is removed; (8) debridement with removal of all loose tags of tissue so that the remaining surfaces have a good vascular supply; (9) ligation of all bleeding points with

fine material; (10) repair of all important structures, such as tendons, nerves, and so forth; (11) the decision as to whether or not immediate closure is advisable; (12) administration of gas gangrene or tetanus antitoxin when indicated; (13) application of large soft dressings with some compression; (14) immobilization or placing the affected part at complete rest; and (15) no molestation of the dressing for several days unless the patient has an elevation of temperature or evidence of infection.

(Author's Note: I wish to congratulate the Iowa State Medical Society and the Iowa State Department of Health, which, under the able leadership of Dr. Walter L. Bierring, have brought forth so important a symposium that is indeed opportune at this period in our nation's history.)

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SURGERY IN MEDICAL EMERGENCIES*

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When the topic of surgery in medical emergencies is suggested, the first thoughts which probably will come to mind are the heart, the large vessels, the management of acute embolic and thrombotic occlusion of the arteries and veins of the extremities, and allied problems. These are important, of course, but fortunately they are rare in their occurrence. Although they are extremely infrequent and may never be encountered, one nevertheless should have at least a working knowledge of their possibilities. I shall, accordingly, discuss them in the following order: (1) Heart Injuries, (2) Peripheral Vessels, (3) The Common Cold, (4) Diabetes Mellitus, (5) Cardiac Failure, (6) Tuberculosis, and (7) The Aged Patient (Geriatrics).

HEART INJURIES

Heart injuries are uncommon. The injury is usually caused by a sharp implement. Patients with gunshot wounds of the heart usually die from hemorrhage before the patient reaches the hospital. Most heart wounds are complicated by pleural injury, hemothorax, pneumothorax, or a combination of all. In a symptomatic way the history of a trauma followed by a symptomless interval during which time the pericardium fills with blood is important. There is also shock and dyspnea. The presence of bleeding is shown by a fast pulse. The physical signs of tamponade are present; namely, a low or unobtainable blood pressure, weak, rapid, or absent radial pulse, distant and muffled heart sounds, increased venous pressure with distended veins in the neck, dyspnea, and pallor. Fluoroscopically, there is an absent or markedly decreased cardiac pulsation. The mortality rate is dependent upon the type and location of the wound and on the promptness in which surgical aid is given. The prognosis is better in ventricular wounds than in auricular wounds. Surgical intervention should be instituted within an hour or two.

One might also mention in this connection pericardiectomy, which is performed for the relief of signs and symptoms known as Pick's syndrome. Such signs and symptoms are high venous pressure, low arterial pressure, ascites, normal-sized heart, and the absence of signs of heart disease. In this situation there is a constriction of the heart by a dense pericardium. The surgical treatment consists of the removal of the pericardial scar. This type of surgery is not an emergency; it is done at a time of election, and should be performed by a specifically trained surgeon.

PERIPHERAL VESSELS

The surgeon of today is better able to treat injuries of the peripheral vascular system because he has at his command preparations like heparin and papaverine. The early symptoms of arterial occlusion are numbness, tingling, pain, paresthesia, and anesthesia. The early objective findings of arterial occlusion may be pallor, cyanosis, absent normal pulsations, and paralysis. Gangrene may occur either early or late. The early signs of venous obstruction are swelling of the extremities, edema, and cyanosis. If the obstruction is due to thrombosis in the vein, the thrombus may be palpable. In problems of this type the first concern is to restore the original circulation and to promote therapeutically the growth of an adequate collateral circulation.

Cases of occlusion are seen which open and develop an effective collateral circulation without any therapeutic assistance. Others do not respond for the reason that when an embolus occludes an artery, the arterial bed in this extremity is thrown into a greater or lesser degree of spasm. Unless spasm is considered, one might surgically open one of these large vessels and find not an embolus but only a spasm. Heat hastens the onset of gangrene and should not be used in cases of questionable occlusion. To secure relaxation of the spasm the intravenous injection of papaverine hydrochloride in 0.5 grain doses every four hours is almost specific. To prevent thrombosis of the collateral circulation and to prevent spreading thrombus formation, heparin is given intravenously every four hours in doses of 50 milligrams each. Should the situation fail to improve, an actual

*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.

organic block must be considered and an embolectomy performed.

THE COMMON COLD

What should be the surgeon's attitude in the presence of the acute cold as a medical emergency? We shall take for granted in the remaining portion of this paper that the surgeon is not simply a technician but that he is sufficiently interested in his patient to ascertain whether or not an upper respiratory infection may be present in his patient. There is something particularly annoying about the situation wherein a patient in good health enters the hospital for an operation of election, contracts a cold, and the operation has to be postponed for several days or weeks. If it could be definitely determined that the cold were a matter of only twenty-four or forty-eight hours of coryza, the situation would not be difficult, but the tendency for infection to spread to the accessory sinuses, middle ear, pharynx, bronchi, and lungs is well known. Aside from the immediate risks and disability, the remote effects may be apparent only after operation when pneumonic complications, infection of wound, eviscerations, and herniae may appear. With this in mind, elective surgery should not be performed even if there is only a suspicion of an upper respiratory infection.

In some cases, however, as for instance an acute appendicitis or strangulated hernia, surgery will be indicated even in the presence of an acute upper respiratory infection. The anesthetic becomes very important. Ether should never be used. Nitrous oxide or ethylene may be used at times. Preferably spinal or local anesthesia will be the one of choice. The operative procedure should be as short as possible. The postanesthetic care should include carbon dioxide inhalations while the patient is still on the operating table, particularly after pelvic and abdominal operations. It has been clearly shown that merely opening the abdomen causes a limitation of the diaphragmatic movements because of the loss of intra-abdominal negative tension and that diminution of vital capacity occurs. The inhalations of carbon dioxide, sufficient to cause hyperpnea, should be repeated three or four times daily. The reduction of pulmonary complications among patients on such a regime is striking. Lastly, one of the sulfanilamide derivatives should be used postoperatively in questionable upper respiratory infections. It has been my practice to use either sodium sulfathiazole or sodium sulfadiazine intravenously.

DIABETES MELLITUS

What should be the procedure of the surgeon in the diabetic patient as a medical emergency? Naturally every patient who is to have surgery should have a urine examination. If sugar is found in a patient who is not a known diabetic, this will have to be taken into consideration. In emergency surgery a blood sugar test can be quickly made and will be of help. In elective surgery a sugar tolerance test can be made to differentiate the true diabetic patient from the individual with a lowered renal threshold. Improvements in the treatment of the diabetic patient have greatly lessened the risk of operative procedures. Certain hazards are peculiar to the disordered metabolism of such a patient and are incidental to his treatment. Among these the most important are acidosis and coma. Every surgical diabetic patient must be regarded as a candidate for coma, just as every diabetic person receiving insulin should be regarded as a candidate for hypoglycemia. Hyperglycemia, if improperly treated or neglected, may lead to acidosis and coma. Hyperglycemia may be associated with infections, intoxications or anesthesia. Hypoglycemia may occur in the emaciated or undernourished patient or in one whose diet has been suddenly restricted. If this condition is present, it must be recognized and treatment by means of glucose solution must be given and repeated until the blood sugar is brought to normal and maintained. A common cause for hypoglycemia is the use of insulin in amounts not adjusted to the diet of the patient. In weak, emaciated patients even a very small dose of insulin, as low as five units, may provoke severe and even fatal hypoglycemia. A patient, who before operation requires large doses of insulin, may, if surgery has drained his infection, so improve in tolerance that a very much lower dose of insulin within a few days may become excessive, and hypoglycemia may develop. Acidosis may develop an interesting diagnostic problem. Previous to the development of coma, the patient may experience a variety of symptoms suggesting surgery. There may be pain in the abdomen, constipation, nausea, vomiting, headache, leukocytosis, and elevated temperature. The abdominal pain of diabetic acidosis is severe and constant but not well localized. There are no localized physical findings. In early stages it may require differentiation from acute appendicitis, duodenal ulcer, acute pancreatitis, or intestinal obstruction. The question of anesthesia is again important in the diabetic patient. If spinal anesthesia can be used in a known diabetic patient, his previous management in regard to diet alone or diet plus insulin may not have to be interrupted. If one of the inhalation anesthetics is used, the insulin dosage postoperatively may have to be varied and, in the

event of nausea, glucose may be provided intravenously.

CARDIAC FAILURE

We are all familiar with the toxic goiter type of heart and know that preoperative lugolization will do more for this type of heart than digitalis. In the usual operation of election, the anatomic condition of the heart is often of less importance than is the functional state. A history of weakness, shortness of breath, pounding of the heart, or tachycardia on moderate exertion, precordial pain, swelling of the ankles, or unexplained indigestion suggests impaired circulation due to failing myocardium. In the presence of such a history, the burden of proof will rest with the surgeon; that is, he will have to discover the cause. In the absence of such a history there is no need of concern about the heart unless there are unexpected physical findings indicative of heart disease. The finding of a normally situated apex impulse is often excellent assurance as to the normal functional capacity of the heart.

The presence of gross enlargement of the heart, arrhythmias, signs of failure, or unexpected blood pressure readings should suggest consultation with a competent internist. Everyone knows and forgets that a heart which is so damaged by overwork that it begins to fail in its circulatory function needs rest and freedom from strain of any sort. Rest in bed, sedatives, limitation of fluid intake, liquid diet, and digitalis are important. If extensive edema is present, one of the organic mercury compounds will be of value. If cyanosis is present, the oxygen tent or oxygen through a nasal catheter will be of value.

Once compensation has been reestablished, the risk of the usual surgical procedures is often not markedly increased over that of the patient who has never had cardiac decompensation. While this is true, it is often wise to postpone the operation for a month or two in order that the patient may go home and demonstrate conclusively his ability to carry on a fairly useful life without becoming decompensated again. If he cannot do this, operation of election should be performed only when it is for the relief of considerable pain or other stress to the patient.

TUBERCULOSIS

The technic of handling general surgical problems in tuberculous patients has developed with the evolution of thoracic surgery. Urgent surgery is handled in the same way among the tuberculous patients as it is among the nontuberculous patients. Appendicitis is taken care of promptly. The temperature, pulse, and white blood count are at times a little confusing in the tuberculous patient. Preanesthetic preparation is important so that there will be a minimum of fear and the reflex irritability of the patient will be reduced without depression of circulation or respiration. Nembutal or seconal may be given from two to two and one-half hours before operation followed by morphine sulfate and scopolamine, or scopolamine alone, from one to one and one-half hours before the anesthetic. The matter of anesthetic is important. Ether is irritating and should not be used. Evipal and allied preparations intravenously are short acting and in anesthetic concentrations are respiratory depressants and should not be used. Spinal anesthesia is good. Nitrous oxide and ethylene are satisfactory. Cyclopropane can be used.

When the question of nonurgent surgery arises, there is a definite problem to be faced. This type of surgery should be delayed until the optimum time as related to the progress of the pulmonary disease.

Intestinal tuberculosis is no longer a surgical problem. These patients with ultraviolet light and vitamin treatment now do as well without surgery.

Hernia is a problem in tuberculosis which is at times difficult to handle. With hard coughing the hernia may recur. It is well to postpone repair until the cough has ceased or is easily controllable.

GERIATRICS

Many aged patients are allowed to die when an operative procedure might not only prolong their lives but might make them sufficiently comfortable to make prolonging it worthwhile. In 1850 the life expectancy at birth was forty years; by 1930 the life expectancy at birth had increased to sixty years and it is now over sixty-three years. In 1900 about three million people of the total population in the United States were over sixty-five year of age; today there are over eight million. As a result, geriatrics, which deals with the problems of advancing years, is becoming a specialty. With increasing age there are definite complicating factors which make operations more difficult and more dangerous than in earlier life, but there is no reason why persons of advancing years should not be given a chance to live longer and to live comfortably.

It is very important in the elderly patient to evaluate carefully the general health and the physical condition, and also to give consideration to the psychologic side of the patient. Attention should be paid particularly to the matter of hydration, oral hygiene, and cardiac disability. In a preoperative way it is well to know the blood sugar and the nonprotein content. One should be sure that there is no suspicion of a chronic upper respiratory infection. Blood pressure estimations will give some idea of the condition of the circulatory sys-

tem. The surgeon may not forget that the mental state of the patient has a great influence in convalescence.

In a preoperative way it is advantageous to give glucose and saline intravenously the day before. Adrenal cortex given a day or two before the operation is of value in preventing shock. Morphine and scopolamine an hour before the operation may minimize the danger of shock. Digitalis is used by many good men in almost all serious operations in cases of the aged.

A good anesthetic and a good anesthetist are highly desirable. Ethylene induction with ether sequence is satisfactory. Spinal anesthesia is very good in selected patients. Cyclopropane or avertin may be used.

Speed and gentleness are necessary for surgical success in the aged. Gentleness, however, should not be sacrificed for speed. There should be as little injury to the tissues as possible.

Postoperatively, deep breathing every two hours or carbon dioxide inhalations may prevent pulmonary complications. Glucose and saline administered intravenously, as well as adrenal cortex, help to prevent shock. Preventive measures against thrombosis and embolism include the Trendelenberg position, warmth to the legs, early active and passive motion of the extremities and massage. Hypostatic congestion can be prevented by frequent change of position of the patient. It is advisable to get the aged patient out of bed as soon as possible. Good nursing care is important. Prostigmine methylsulfate may prevent postoperative distention. Opiates should be used sparingly. Alcohol may be beneficial. Transfusions of blood may be important. Blood plasma may be indicated at times. If there is a question of infection, one of the sulfanilamide derivatives may be used.

AN EPIDEMIC OF TYPHOID FEVER IN IOWA

A Foodborne Outbreak Caused by a Small Colony Strain of Eberthella Typhosa

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An epidemic of typhoid fever which occurred in Davis County, Iowa, during August and September, 1939, presented several characteristics so unusual as to warrant reporting at this time.

CLINICAL, EPIDEMIOLOGIC AND LABORATORY CONSIDERATIONS

On August 18, 1939, word was received by the District Health Office in Centerville, through the State Department of Health, of the occurrence of a gastro-intestinal disturbance resembling food poisoning which was affecting individuals who were hospitalized in Ottumwa. The cases were first reported by Ralph J. Selman, M.D., of Ottuma, who stated that additional patients were under treatment in their homes at Ash Grove, a rural community in Davis County twelve to fifteen miles southwest of Ottumwa.

Investigation and home visits in the Ash Grove Community on August 19 disclosed the fact that an epidemic of gastro-intestinal nature was indeed in progress. Information obtained from various families revealed that exposure on the part of all patients probably occurred at a picnic which was held Sunday, August 6, at the Ash Grove church grounds. Careful inventory showed that ninety-seven people attended the function and partook of food. Although most of the people lived within a few miles of the church, visitors attended from other communities within a radius of forty miles, including three adjacent counties.

Number of Patients: During the last three weeks of August and the first week of September, thirty-four persons had onset of an illness which proved to be typhoid fever. As indicated in the accompanying table (Table I), twenty-nine patients developed symptoms during the first week after exposure and represent primary cases; the remaining five are regarded as secondary cases, four following exposure in homes and one in a hospital.

Explosive Nature of Outbreak: A remarkable feature of the epidemic was the unusually short incubation period, rarely observed in typhoid fever. Eight persons began to complain within seventy-two hours and twenty-nine were on the sick list by the end of the seventh day after exposure (Table 1). The explosive nature of the outbreak tended to confirm the initial opinion of several physicians that infection was due to a form of food poisoning and not to typhoid fever. Dependence had to be placed on the laboratory to establish the true nature of the infection.

Age and Sex Distribution: Another unusual feature was the preponderance of illness among females (Table II). Among the ninety-seven who attended the picnic, fifty-three were females and forty-four males, an approximate ratio of five to four. Of the total of thirty-four patients, twenty-five, 74 per cent, were females compared with nine, 26 per cent, males, a ratio of more than five to two.

The number of patients of various ages was not out of proportion to the number comprising the different age groups.

Laboratory Findings: Stool specimens from patients, as received at the State Hygienic Labora-

TABLE I
Number of Cases and Dates of Onset of Illness

Days and Weeks	Sun. Aug. 6 (Picnic)	M 7	T 8	W 9	T 10	F 11	S 12	S 13	Mon.-Sat. 14-19	Wk. End. Sat. 8/26	Wk. End. Sat. 9/2	Wk. End. Sat. 9/9	Total
Days after Exposure		1	2	3	4	5	6	7	8-13	14-20	21-27	28-34	
Primary Cases and Dates of Onset		..	..	8	5	8	4	4					29
Secondary Cases and Dates of Onset		..	..	..	..	..	..	..			4	1	5
Total Cases													34

tory on August 23, were found to contain large numbers of Eberthella typhosa. Isolation of the organisms, together with positive agglutination tests on serum specimens, established the fact beyond doubt that the epidemic was caused by typhoid fever.

The most unusual feature of the Ash Grove outbreak was the discovery for the first time in Iowa of a small colony strain of Eberthella typhosa, different from the usual strains of typhoid bacilli. Morris, Sellers, and Brown[1] of the Georgia State Department of Health reported on the isolation in 1934 of a small colony strain of typhoid organism as found in ten cases of typhoid fever.

On primary isolation from blood clot cultures and stools, the Ash Grove strain of Eberthella typhosa presented certain characteristics which set it apart very distinctly from other strains of Eberthella typhosa which have been isolated in the State Hygienic Laboratory over a period of fourteen years. Specimens inoculated onto eosin-methylene blue plates directly and from Selenite—F broth and incubated twenty-four hours showed the presence of colonies 0.5 to 1.0 millimeter in diameter which closely simulated colonies of fecal streptococci. Continuing the incubation to forty-eight hours the colonies increased in size varying from 1.0 to 3.0 millimeters in diameter. Colonies on bismuth sulfite were undetectable to the naked eye on twenty-four hours' incubation but in forty-eight hours varied from 1.0 to 3.0 millimeters, were definitely black, and were surrounded by the typical metallic halo. Repeated subculturing gradually led to colony production of increasing size, eventually approximating those of the usual typhoid colonies. The satellite phenomenon was produced on nutrient agar plates.

TABLE II
Distribution of Cases by Age and Sex

Age	Male	Female	Total	Per Cent
0- 9	1	4	5	14.7
10-19	0	5	5	14.7
20-29	4	7	11	32.4
30-39	4	6	10	29.4
40-49	0	2	2	5.9
50 plus	0	1	1	2.9
Total	9	25	34	100.0

Acid butt and slant were produced on Russell's double sugar culture medium in eighteen to twenty-four hours, which changed in thirty-six to forty-eight hours to alkaline slant, the butt remaining acid. Similar findings were noted on Kligler's iron agar except for a varying degree of hydrogen sulfide production.

This (small colony) strain is outstanding in that xylose is not fermented in seventy-two hours. In contrast to this, all other strains of Eberthella typhosa isolated from Iowa patients have regularly fermented xylose with acid production.

Small colony strains when incubated in broth for twelve to eighteen hours exhibit sluggish motility. Saline suspensions from agar slants when set up against "O" and "H" anti-typhoid serum gave the typical "O" agglutination response. Mice were regularly killed by intraperitoneal inoculation of 0.2 cubic centimeter of an eighteen hour broth culture.

Outstanding characteristics of the Ash Grove strain are the smallness of the colonies, their simulating colonies of fecal streptococci on eosin-methylene blue plates, the atypical reaction on Russell's double sugar and Kligler's iron agar in eighteen to twenty-four hours, sluggish motility, failure to ferment xylose, and the production of relatively pure "O" agglutination and antiserum.

Morris[1] and coworkers have described in detail the cellular morphology and cultural characteristics of two strains (208 and 208D). They observed colonies of three sizes: large, small and invisible (except by microscope). The Satellite phenomenon was observed in the small colonies. Small colonies produced both large and small col-

onies, large colonies only the large. Atypical reactions were encountered on Russell's double sugar culture medium. Normal-sized colonies of normal organisms could be obtained on the addition to culture media of organic or inorganic substance containing sulfur.

The accompanying table (Table III) contains data pertaining to the group of thirty-four patients in the Ash Grove outbreak, with results of agglutination reactions and blood culture study.

Contaminated Food the Probable Mode of Transmission: The water from a well at the picnic area was used for drinking purposes and to dilute iced tea. Although it was examined bacteriologically and reported as unsafe due to the presence of large numbers of Escherichia coli and Aerobacter aerogenes, water is not regarded as having played a major part in the spread of the infection. While 77.0 per cent of the typhoid fever patients had drunk water or iced tea, 70.0 per cent of the persons who escaped illness had likewise done so. Neither milk nor ice cream was served at the picnic.

Table IV lists the kinds of food eaten by those who attended the homecoming celebration at Ash Grove, also the number of clinical infections and infection rates associated with each article of food.

Thorough consideration was given to the kinds of food eaten by the patients and by those not attacked. The infectivity rates associated with the various foods served indicate that a combination of dishes rather than a single item of food, accounted for the spread of typhoid fever.

Probable Source of Infection: A past history of typhoid fever was obtained in seven families in the Ash Grove community, but no cases of the disease had been known to occur for a period of twenty-nine years. Fecal and urine specimens from persons who had this disease in the remote past were examined at the State Hygienic Laboratory; all specimens failed to show the presence of typhoid bacilli.

An itinerant negro minister from South Carolina who visited the Ash Grove Community until August 18 and who was said to have experienced a febrile illness shortly before his arrival, was suspected as a possible source. Through courtesy of

TABLE III
Age, Sex, Date of Onset, and Laboratory Findings in Thirty-four Cases of Typhoid Fever

No.	Patient	Age	Sex	Date of Onset	Laboratory Findings			
					Stool Culture	Clot Culture	Agglutinins "O"	"H"
1.	Mrs. M. W.	34	F	8- 9-39	....	....	1-640	1-640
2.	M. W.	34	M	8- 9-39	....	Pos.	1-160	1-20
3.	I. S.	30	F	8- 9-39	Pos.	....	1-20	1-640
4.	M. S.	5	F	8- 9-39	Pos.	....	No Record	
5.	D. S.	11	F	8-13-39	Pos.	....	No Record	
6.	J. S.	7	M	8-29-39	....	....	No Record	
7.	O. L.	36	M	8- 9-39	....	....	1-160	1-160
8.	E. L.	35	F	9- 7-39	....	....	No Record	
9.	W. K.	30	M	8- 9-39	Pos.	Pos.	1-320	1-160
10.	I. K.	28	F	8- 9-39	....	....	1-160	1-160
11.	F. K.	23	M	8- 9-39	Pos.	Pos.	1-640	1-320
12.	L. A. H.	32	F	8-10-39	....	....	1-80	1-320
13.	G. H.	25	F	8-10-39	Pos.	....	1-160	1-640
14.	W. C.	25	M	8-10-39	Pos.	....	Neg.	1-640
15.	Mrs. C. J.	36	F	8-11-39	Pos.	....	1-320	1-640
16.	Mrs. A. K.	27	F	8-11-39	....	....	1-160	1-640
17.	M. H.	21	F	8-11-39	....	....	1-40	1-640
18.	Mrs. C. R.	42	F	8-11-39	....	....	1-80	Neg.
19.	I. W.	21	F	8-12-39	Pos.	....	1-640	1-320
20.	D. W.	18	F	8-12-39	....	....	No Record	
21.	H. T.	19	M	8-12-39	....	....	1-160	1-40
22.	B. O.	33	F	8-13-39	....	....	1-640	Neg.
23.	I. B.	7	F	8-13-39	....	....	1-320	1-20
24.	L. H.	38	M	8-13-39	Pos.	Pos.	1-40	1-80
25.	V. B.	21	M	8-12-39	....	....	1-160	Neg.
26.	Mrs. E. B.	48	F	8-11-39	Pos.	....	1-20	1-80
27.	W. B.	16	F	8-11-39	....	....	No Record	
28.	B. B.	18	F	8-11-39	....	....	No Record	
29.	N. B.	10	F	8-11-39	....	....	Neg.	Neg.
30.	D. B.	7	F	8-10-39	....	....	No Record	
31.	M. B.	6	F	8-10-39	....	....	No Record	
32.	Mrs. L. H.	62	F	8-27-39	....	....	No Record	
33.	T. H.	30	F	8-31-39	Pos.	....	No Record	
34.	D. J.	31	F	8-27-39	....	Pos.	1-640	1-320

TABLE IV
Foods Served at Ash Grove Picnic
Kinds of Food Eaten by Patients and by Persons Who Escaped Illness With Infection Rates Associated With Each Kind

Food	29 Fever Patients		41 Persons Not Attacked		No. Known to Have Eaten	No. Inf.	Inf. Rate (%)
	No. Eating	Not Eating	No. Eating	Not Eating			
Potato Salad	24	5	16	25	40	24	60
Cake	24	5	33	8	57	24	42
Angelfood Cake	22	7	17	24	39	22	56
Fried Chicken	20	9	32	9	52	20	38
Fruit Salad	19	10	27	14	46	19	41
Iced Tea	18	11	25	16	43	18	42
Pie	15	14	26	15	41	15	37
Chicken Sandwich	12	17	0	41	12	12	100
Macaroni and Cheese	12	17	20	21	32	12	36
Bean Salad	11	18	7	34	18	11	61
Oyster Dressing	9	20	7	34	16	9	56
Meat Sandwiches	8	21	9	32	17	8	47
Bologna	7	22	13	28	20	7	35
Water	7	22	3	38	10	7	70
Carrot Salad	7	22	6	35	13	7	54
Pork and Beans	7	22	11	30	18	7	39
Sliced Tomatoes	6	23	5	36	11	6	55
Meatloaf	4	25	3	38	7	4	57
Cabbage Salad	4	25	4	37	8	4	50
Bread and Butter Sandwich	5	24	6	35	11	5	45

the South Carolina State Department of Health, this individual was visited at his southern home by G. E. McDaniel, M.D., Director of the Division of Preventable Diseases in that state; stool and urine specimens of the suspected person were examined and reported in May, 1942, as being negative for Eberthella typhosa.

Course of Illness: No fatalities occurred in the group of thirty-four patients, although four suffered intestinal hemorrhage and several were in critical condition. One of the patients was found to harbor typhoid organisms a year after illness and is now listed as a chronic typhoid carrier.

SUMMARY

1. A typhoid epidemic involving thirty-four (twenty-nine primary and five secondary) cases occurred in the Ash Grove Community, Davis County, Iowa, following a church picnic which afforded the common means of infection.

2. The outbreak was characterized by a very short incubation period, by an explosive type of onset, and by a preponderance of illness among females.

3. A small colony strain of Eberthella typhosa exhibiting unusual cultural and morphologic characteristics was encountered for the first time in the experience of the Iowa State Hygienic Laboratory.

4. Infection was probably conveyed by food suspected of having been contaminated by a typhoid carrier.

REFERENCE

1. Morris, J. F., Sellers, T. F., and Brown, A. W.: Primary isolation of small colony strains of Eberthella typhosa from blood, feces, urine and sputum. Jour. Infect. Dis., lxviii:117-124 (March-April) 1941.

THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

SOLITARY DIVERTICULITIS OF THE CECUM

LAFE H. FRITZ, M.D., Dubuque

In a recent article Baker and Carlile[1] called attention to solitary diverticulitis of the cecum and discussed the difficulties of diagnosing the condition preoperatively or at operation. The following case was encountered about one month after the appearance of their paper and reemphasizes the difficulties encountered before an exact diagnosis is reached in this exceedingly rare condition.

CASE REPORT

Chief Complaint: The patient, a white man fifty-nine years of age, was admitted to Finley Hospital July 11, 1943, with a complaint of "abdominal pain and vomiting."

Family History: Irrelevant.

Past History: The patient had coronary heart disease several years ago. He had lost twenty pounds in weight during the year prior to admission, although his appetite was good. His bowels had been regular, he had not noticed blood in the stool, and had had no pain previous to his present attack.

Present Illness: Twenty-four hours before admission the patient developed a severe cramp-like pain in the lower abdomen. He was given an enema without relief and later became nauseated.

Physical Examination: The patient was a thin, middle-aged man who seemed very ill; he had a sallow complexion. The temperature was 99.6 degrees, the pulse 98, and the respirations 22 per minute. The eyes, ears, nose, and neck were negative. The lungs were resonant to percussion and the breath sounds were normal on each side. The heart was very irregular but no adventitious sounds were heard. The abdomen was flat. There was a spasm of the right rectus muscle and there was marked tenderness in the appendix area where a small mass was palpable. The genitalia, extremities, and nervous system were negative. The white blood cell count was 18,000. Urinalysis revealed a rare leukocyte, hyaline cast, and cylindroid; the specific gravity was 1.018.

Preoperative Diagnosis: Acute appendicitis.

Operative Notes: At operation a hard mass was found involving the cecum and as it was thought to be malignant, the terminal ileum and the cecum were resected. An end-to-side anastomosis of the ileum and ascending colon was made. The appendix was thickened and its serosa was granular. It was removed along with the cecum.

Postoperative Diagnosis: Carcinoma of the cecum; chronic and acute appendicitis.

Pathologic Report: Grossly, the specimen consisted of the resected terminal ileum, the cecum, and appendix. Externally, the cecum presented a hard mass which appeared silvery gray through the serosa. In the most dependent portion a hard, discrete diverticulum could be seen and felt. The appendix was elongated and thickened in the proximal third where the serosa was faintly granular. On opening, the mucosa of the ileum and of the cecum lay in smooth but reddened and edematous folds which in some instances were covered by a little fibrinous exudate. The diverticulum was 2.5 centimeters in its longer diameter and 2 centimeters in the shorter. The cavity was filled by a large fecalith resembling a gallstone (Figure 1).

Microscopically, the sections revealed no evidence of carcinoma but showed diffuse infiltration by an acute inflammatory exudate, especially about the ileocecal valve. The appendix disclosed old fibrosis with constriction of the lumen and there was an acute inflammatory exudate superimposed upon the older process. The diverticulum showed a loss of the mucosa but the thinned-out wall was composed of smooth muscle, connective tissue and the serosa. The wall of the diverticulum was infiltrated with round cells and polymorphonuclear leukocytes.

Pathologic Diagnosis: Chronic and acute appendicitis. Solitary diverticulum of the cecum; fecalith and acute cecitis and diverticulitis.

Postoperative Course: The patient had a smooth and uneventful postoperative course and left the hospital on the thirteenth day after admission in excellent condition. He has remained well to date.

COMMENT

Preoperatively, this appeared to be a typical case of acute appendicitis, but at operation, in addition, the cecum presented the picture usually associated with carcinoma. While the diverticulum containing a fecalith was noted, it was only after histologic studies were completed that the true diagnosis was made. These same diagnostic difficulties have been encountered by the majority of those reporting similar cases. Although the diagnosis was puzzling, in the light of the degree of inflammation about the ileocecal valve and through the wall of the diverticulum, the resection with end-to-side anastomosis proved to be the best form of treatment.



Fig. 1. A photograph of one-half of the cecum showing the diverticulum containing a fecalith.

GENERAL DISCUSSION

Baker and Carlile in their review found thirty-seven cases of solitary diverticulitis of the cecum in the American and British literature. They added two which, with the present case, make a total of forty. Of the forty, twenty-one were females and nineteen were males varying in age between ten and sixty-nine years. Thirty-one of

the forty cases (77 per cent) were in patients over thirty years of age. In general the clinical picture resembles appendicitis, and following are the preoperative diagnoses in their series:

TABLE I

Preoperative Diagnosis	Cases
Acute, subacute, or chronic appendicitis	22
Appendical abscess	5
Cancer or "true tumor"	3
Stump appendicitis	1
Abscess of undetermined origin	1
Diagnosis deferred	2
Not recorded	5

At operation they state that the following conditions were encountered:

"In 4 cases fluid was present. In 16 cases there was local peritonitis. In 1 case general peritonitis was present. In 3 cases the appendix had been removed previously. The appendix was normal in 22 cases, slightly inflamed in 9 cases and acutely inflamed in 2 cases; its condition was not recorded in 3 cases. In 20 cases a fecalith was found in the diverticulum; in 11 cases the presence or absence of a fecalith was not recorded."

In their discussion of the etiology, Baker and Carlile classify diverticula of the cecum as either congenital or acquired: "Congenital or true diverticula consist of all the layers of the bowel wall; acquired diverticula may be subdivided into primary and secondary. Primary acquired diverticula are due to deficiency of the circular muscle of the wall with herniation of the mucosa through the deficiency; secondary diverticula are due to previous operative intervention or adhesions."

They quote Greensfelder and Hiller as listing the following mechanisms: (1) eversion of the cecal wall between two constricting bands, (2) traction of adhesions, (3) eversion of a weak spot in the cecal wall caused by migration of a purse-string suture into the lumen of the intestine, and (4) eversion of the weakened area into the cecal wall resulting from rupturing into the cecum of an abscess of the appendical stump.

They also quote Wilson as stating that three primary factors enter into the formation of a diverticulum: (1) inherent weakness in the wall of the bowel due to age, congenital weakness, obesity, atrophy of the fat along vessels which penetrate the wall, (2) intracolonic pressure, and (3) traction on appendices epiploicae, mesentery or omentum with or without adhesions.

They indicate that the diagnosis of solitary diverticulitis of the cecum is almost impossible to make preoperatively and that in the majority of cases in their series it was thought to be appendicitis. At operation the lesion most often suggested carcinoma, tuberculosis, actinomycosis, nonspecific ulcer, or simple inflammatory tumor. The reader is referred to their original article for the differentiating features. The operative differential diagnosis was difficult in fourteen of their series of thirty-nine cases; resection of the cecum and/or ascending colon was considered advisable, either because of the extent of the lesion or because the lesion was thought to be malignant or tuberculous.

The prognosis in such cases is favorable if the surgeon is capable of performing the necessary operative procedure.

REFERENCE

1. Baker, Joel W., and Carlile, Thomas: Solitary diverticulitis of the cecum. Jour. Am. Med. Assn., cxxii:354-356 (June 5) 1943.

SIXTH ANNUAL MEETING OF THE IOWA INTERPROFESSIONAL ASSOCIATION

The sixth annual meeting of the Iowa Interprofessional Association will be held at the Hotel Fort Des Moines in Des Moines Wednesday evening, October 6, in connection with the annual meeting of the Iowa State Association of Registered Nurses. The program committee has tried to arrange for talks which will be of interest to the five allied groups, and it is hoped that the doctors, dentists, pharmacists, and veterinarians will honor the nurses by attending in large numbers.

Each year the importance of the interprofessional groups becomes greater. Each year the problems which beset the individual professions increase, and the need for working together becomes more imperative. The Iowa Interprofessional Association was formed in the interests of better public health; its function is an educational one. It has faithfully tried to carry out this function through its annual programs. The JOURNAL feels that the presentation this year is especially meritorious, and offers its best wishes to the group and the program committee for a most successful meeting.

Program

Hotel Fort Des Moines — South Ball Room

October 6, 1943

7:45 p. m.

The Wagner-Murray Bill
John W. Billingsley, M.D., Newton

Maintaining Professional Standards in Wartime
Dr. Charles E. Friley, President
Iowa State College

The Potentialities of Chemotherapy, with Especial Reference to Penicillin
Walter L. Bierring, M.D.,
Des Moines

State Department of Health

Walter L. Bierring

POLIOMYELITIS AS REPORTED IN 1943

During the first eight months of 1943 and through September 20, cases of poliomyelitis as officially notified to the State Department of Health totaled 128.

In the following table (Table 1), cases as reported by months in 1943 are compared with the reports for 1940, and with the expected number of cases, the latter being monthly averages obtained from reports covering the past nine and ten year periods.

TABLE I
Poliomyelitis in Iowa

Comparison of cases as reported in 1943 (through September 20) with reports in 1940 and with the expected number (based on monthly averages for the nine-year period 1934-1942 and the decade-period 1933-1942

Months	10-year Average 1933-1942	Tri-central Median 1934-1942	Number reported 1940	1943
January	2	1	12	2
February	2	2	7	2
March	1	1	1	1
April	1	1	1	0
May	1	1	2	0
June	1	0	5	0
July	5	4	21	3
August	28	10	174	35
September	67	20	421	85
October	44	19	242	
November	15	8	32	
December	7	3	11	
TOTAL	174	70	929	128

In the foregoing table, note that the 35 cases reported in August were approximately the expected number (28 and 10 in columns 1 and 2 respectively), and only one-fifth of the number reported in 1940. The comparative figures for September (through the 20th) reflect relatively greater prevalence than in August.

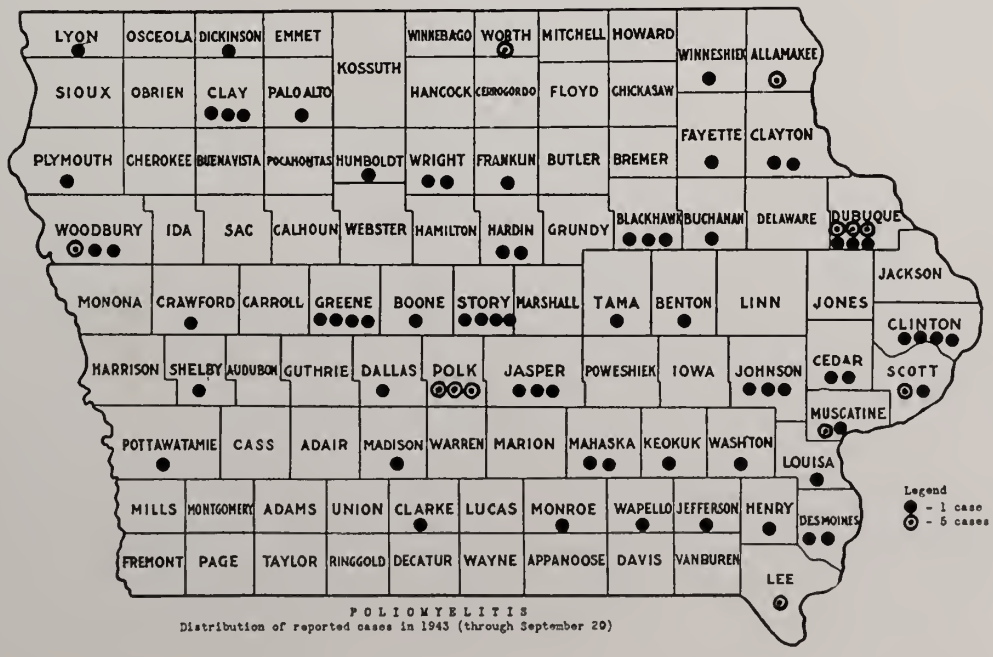
The accompanying map shows the distribution by counties of the 128 cases reported in 1943 up to and including September 20.

PLASMA AND SERUM FOR IOWA HOSPITALS

PLASMA

In February, 1943, a letter from the Commissioner was forwarded to superintendents and staff members of many of the Iowa hospitals, outlining a plan whereby the Serum-Plasma Center of the State Department of Health agrees to receive citrated blood from hospitals, prepare plasma, and return the finished product.

The plasma program has been in operation since April 2, 1943, when the first shipment of citrated blood was made from Greene County Hospital in



Jefferson. Fourteen hospitals have thus far begun development of a blood plasma bank in cooperation with the Serum-Plasma Center. The plan is as follows:

1. Bleeding Bottles and Accessories—It is assumed that a participating hospital is equipped with bleeding bottles and necessary supplies to collect citrated blood and to meet requirements for immediate blood transfusions. Blood containers and accessory articles are satisfactory for procurement of citrated blood, provided that they conform with the standards of the National Research Council as set forth in the Manual on Plasma Preparation issued by the Office of Civilian Defense.

2. Special Container for Shipment—The Serum-Plasma Center has available for use by hospitals, special containers insulated with cork and constructed to hold dry ice to keep citrated blood cold during transportation. A container is shipped in advance on request, or may be purchased by the hospital at cost.

3. Procurement of Citrated Blood—A staff physician or trained hospital assistant secures a pint of blood in citrate-dextrose solution from each of four to six donors. Residual blood in the rubber tubing is allowed to drain into a sterile tube as a specimen for serologic tests. The tube is attached to the outside of the bottle as a pilot tube. The bottles containing citrated blood and the pilot tubes are chilled in the refrigerator for several hours before shipment by prepaid express to Des Moines.

4. Preparation of Plasma—When the bottles of citrated blood are received, the plasma is separated, subjected to serologic, bacteriologic and animal inoculation tests in accordance with regulations of the Biologics Division of the United States Public Health Service and of the National Research Council's Subcommittee on Blood Substitutes, pooled into an approved type of dispensing flask, and aged for a minimum period of two weeks.

5. Return of Finished Product—After preparation, pooled plasma-filled bottles (250 cc. units) are returned, transportation charges collect, to the hospital for storage. preferably at room temperature, until time of use.

6. Contribution for Plasma—Express charges are paid by the hospital; a nominal charge ($3.50 per 250 cc. bottle of plasma for hospitals away from Des Moines) is made to cover cost of processing.

SERUM

Expenses incident to travel and processing make it necessary to effect the following arrangement with reference to distribution of pooled normal human serum:

1. A charge to the hospital of $5.00 per 250 cc. unit, or $10.00 per 500 cc. bottle.

2. Serum will be furnished free of charge for the indigent patient, provided that a case report is completed and returned to the Serum-Plasma Center, summarizing indications for and results attending use of serum.

3. Serum will be furnished free of charge for wives of men serving with the armed forces, provided that a case report is completed and returned to the Serum-Plasma Center, summarizing indications for and results attending use of serum.

PREVALENCE OF DISEASE

Disease	Aug. '43	July '43	Aug. '42	Most Cases Reported From
Diphtheria	14	3	18	Woodbury
Scarlet Fever	55	49	46	For the State
Typhoid Fever	6	1	6	For the State
Smallpox	0	2	0	None
Measles	28	254	51	Clinton, Linn, Woodbury
Whooping Cough	144	243	128	Dallas, Linn, Washington
Brucellosis	39	39	39	For the State
Chickenpox	8	31	22	For the State
German Measles	3	11	0	Des Moines, Johnson, Story
Influenza	0	1	0	None
Malaria	1	11	0	Lee
Mumps	33	101	62	Bremer, Floyd, Woodbury
Pneumonia	9	11	18	For the State
Poliomyelitis	35	3	16	For the State
Tuberculosis	54	41	68	For the State
Tularemia	0	0	0	None

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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Office of Publication, Des Moines 9, Iowa

Vol. XXXIII OCTOBER, 1943 No. 10

LET'S BE GETTING READY FOR PENICILLIN

From the circulating verbal reports, and from the relatively few published articles, there would seem to be little doubt that penicillin is fulfilling all its advance press agent notices as another miracle drug equal to and perhaps even surpassing the sulfonamides. It would appear, therefore, that the time is here when physicians should begin to familiarize themselves with this remarkable new substance. For, although the bulk of all available supplies is now going to our military forces, it is altogether likely that means will be found with increasing frequency in the not too distant future to meet suitable emergency needs in civilian life.

The Committee on Chemotherapeutic and Other Agents, Division of Medical Sciences, National Research Council, headed by Dr. Chester S. Keefer of Boston, reports in the August 28 issue of *The Journal of the American Medical Association* on the results obtained by penicillin in the treatment of 500 cases of various types of infections. The cases were distributed among twenty-two groups of investigators who submitted their results to the chairman for summarization. The study was limited to those infections most likely to occur in the armed forces and to those resistant to the sulfonamides. Cases in each of the following categories were treated:

1. Staphylococcus aureus bacteremia.
2. Local Staphylococcus aureus infections failing to respond to the sulfonamides.
3. Streptococcic infections failing to respond to the sulfonamides.
4. Pneumococcic, streptococcic, and staphylococcic meningitis or empyema.
5. Pneumococcic pneumonia failing to respond to the sulfonamides.
6. Sulfonamide resistant gonococcic infections.
7. Subacute bacterial endocarditis.

The unit of measurement of penicillin is the Oxford unit defined as the amount of penicillin under suitable conditions necessary to just inhibit completely the growth of a test strain of Staphylococcus aureus. The number of Oxford units necessary in the treatment of a patient varies within wide limits and is dependent upon the type and location of the infection. Oral and rectal modes of administration are ineffective since the drug is inactivated by acid and by Escherichia coli. Intravenous, intramuscular, and topical routes are satisfactory. Penicillin does not appear to be secreted in the cerebrospinal fluid following parenteral administration, hence intrathecal injections are required along with parenteral injections in the treatment of meningitis. The drug is injected directly into the pleural, pericardial, and joint spaces when infections in those localities exist. Excretion of the drug in the urine is rapid after intravenous or intramuscular injections. The average excretion after intravenous injection was 58 per cent of the administered dose. Because of this rapid excretion administration of the drug must be at frequent intervals. In fact, the authors lay stress upon the advantage of the continuous intravenous drip method. Toxic effects from penicillin injections are mild and of unusual occurrence. Occasionally chills with fever, or headache and flushing of the face were noted. Urticarial eruptions were noted in fourteen cases. Sensitivity to subsequent injections have not been observed.

A total of ninety-one patients with Staphylococcus aureus bacteremia received penicillin treatment. Of these 60 per cent recovered. Compared to the usual 85 per cent mortality rate in this condition, the reported results are indeed striking.

There were 137 patients with local staphylococcic infections without bacteremia treated. Of these 80 per cent recovered, 8 per cent died, and in 12 per cent there was no observed effect. Forty-eight out of fifty-five patients with osteomyelitis recovered. Seven of nine patients with empyema recovered. The fatal cases in this group were all desperately ill before treatment was started.

Brilliant results were secured in the treatment of sulfonamide resistant cases of gonorrhea. There were 129 such cases. In 125 there was freedom from symptoms and they were bacteriologically negative in from nine to forty-eight hours after treatment with 100,000 to 160,000 units. Meningococcus meningitis, pneumococcus pneumonia, and streptococcal infections other than bacterial endocarditis likewise respond remarkably to penicillin therapy. Results of the treatment of cases of subacute bacterial endocarditis were disappoint-

ing. Seventeen such patients were included in the study. Four died and no effect was observed in ten. Three patients improved temporarily but two of them suffered relapse later. Total dosage varied per patient from 240,000 to 1,760,000 units over a period of from nine to twenty-six days.

The summary and conclusions of the Committee's report are quoted in full in the following paragraphs:

"Penicillin is a remarkably potent antibacterial agent which can be given intravenously, intramuscularly or topically. It is ineffective when given by mouth.

"Following intravenous or intramuscular injection it is excreted rapidly in the urine, so that in order to obtain an adequate amount of potent material in the circulating blood and tissues it is necessary to inject penicillin continuously or at frequent intervals; that is, every three to four hours.

"Penicillin has been found to be most effective in the treatment of staphylococcic, gonococcic, pneumococcic and hemolytic streptococcus infections. It has been disappointing in the treatment of bacterial endocarditis. Its effect is particularly striking in sulfonamide resistant gonococcic infections.

"While the dosage schedule requires additional investigation, it seems clear that the average patient requiring intravenous or intramuscular injections for serious staphylococcic infections requires a total of between 500,000 and 1,000,000 Oxford units, and the best results have been observed when treatment is continued for at least ten days to two weeks. At least 10,000 units should be given every two to three hours at the beginning of treatment, either by continuous intravenous injection or by interrupted intravenous or intramuscular injections.

"Satisfactory results are obtained in sulfonamide resistant cases of gonorrhea following the injection of 100,000 to 160,000 units over a period of forty-eight hours.

"Patients with pneumococcic pneumonia frequently recover following the use of 100,000 units given over a period of three days. This is especially important in sulfonamide resistant pneumococcic infections. It may be necessary to give between 60,000 and 90,000 Oxford units daily for four to seven days to get a maximum effect.

"In the treatment of empyema or meningitis it is advisable to use penicillin topically by injecting it directly into the pleural cavity or the subarachnoid space.

"Toxic effects are extremely rare. Occasional chills with fever, or headache and flushing of the face have been noted. Urticaria has been reported and thrombophlebitis at the site of injection has been described."

EMERGENCY MATERNITY AND INFANT CARE PROGRAM

That the Federal Government's program of providing obstetric and pediatric care for the wives and infants of enlisted servicemen is not entirely pleasing to many members of the medical profession is probably a gross understatement of the real situation. No criticism is raised against the plan of providing care for the families of the men in the fighting forces, for there is nothing humanly possible which would be too much to do for these men in far away places who are suffering untold hardships, homesickness, and even sacrificing their lives. Criticism is directed against the method of carrying out the program. There are a number of points which need to be raised in the hope that as experience in this type of program brings errors to light they may be corrected in subsequent legislation. The first of these points is well expressed in an editorial in the September 4 issue of the *Washington Post* entitled "Letdown in Standards." Says the *Post:*

"Congress took a long step toward meeting the nation's obligation to the families of enlisted men when it provided, shortly before adjourning for its summer recess, a fund of $4,400,000 for the care of soldiers' and sailors' wives who are having babies. Heretofore some of these young mothers have had to appeal to welfare organizations for help in securing medical care and hospitalization at the time their infants are born. Now in states cooperating under this plan the wife of a serviceman may arrange for prenatal, delivery and postnatal care, with hospital and doctor bills paid by the state health department.

"In one respect, however, the law is much inferior to most of our legislation requiring a matching of Federal and State funds for social welfare programs. An amendment forbids the Children's Bureau to set up standards of obstetrical practice in administration of the fund. Any practitioner permitted to serve in lieu of an obstetrician under State law, may be paid from this fund. In some states this will mean that diploma mill graduates utterly incompetent to handle a complicated case of childbirth will be put on a par with highly trained specialists in this sphere.

"We find it difficult to believe that Congress added this amendment deliberately. The principle that Federal agencies should prescribe minimum standards to be met by the states when they take advantage of Federal grants of this sort is well established. There seems to be no reason for departure from that principle in this case. Yet Congress has departed from it, and the result may be a tragic letdown in the high standards of obstetrical service which this country has set up in recent years. Since the lives of mothers and children are at stake, we believe that Congress should reconsider this ill-advised amendment when it returns to Washington."

The second question we would raise is why congress found it necessary to include the families

of all servicemen in the program, regardless of their financial status. It may have been expected that those well able to pay would not make application for governmental aid, but such does not seem to be the case. The average attitude so far as we can learn is illustrated by a situation in our own experience. Both maternal and paternal grandparents, together with the mother and her infant, presented themselves from a town seventy-five miles away. The baby's trouble was pyloric stenosis necessitating hospitalization. In making application for free hospital and medical care the paternal grandparents put it this way. Their son was in Africa. He had given up a good job at which he made good money. He was working for Uncle Sam now at a considerable sacrifice in wages and he was giving up much else besides. They, his parents, felt he was entitled to anything which the government offered, a sentiment with which we heartily agreed. However, they pointed out, if the application for free care does not go through, he can afford to pay for it, and if he cannot we can.

This leads to the next point, which is perhaps the one most irritative of all to physicians. There are people well able to pay for medical service, but the government not only dictates what the physician's fee for his services shall be in the case, but also inserts a proviso in the application which the physician must sign to the effect that supplementary payment from the family must not be accepted. This clause in the application should be excluded in subsequent legislation. Physicians resent being told what arrangements they shall make with their patients for the medical services they render. Both obstetric and pediatric fees are considerably below average urban fees for such services. Physicians have always willingly and honorably adjusted their fees to what people could afford to pay and have given freely of their time in clinics and hospitals where medically indigent patients are cared for. But in this program the Federal Government has offered free medical service to large numbers of people, regardless of their ability to pay, and then has stepped between patient and physician and has said by legislative edict to the physician that this is what you will be paid and no more. The effect is that the physician is forced to make a personal contribution of the fees he is not permitted to collect from patients able and willing to pay them.

True the physician is not required to cooperate in the program. He can refuse to sign the application. But few physicians wish to be placed in the embarrassing position of refusing their services to the wives and infants of our servicemen.

A much fairer way of administering this whole program if the government wished to provide obstetric care for wives of enlisted men would have been to pay a stipulated sum directly to the pregnant woman and let the patient and physician make their own financial arrangements.

We believe it important that the attention of physicians should be called to the way in which this program originated. It is not, as some may believe, an idea of the state health departments. As a matter of fact, it began in 1941 when the state of Washington appealed to the Federal Government for aid in caring for the wives and children of servicemen. A number of other states soon followed suit. The result was that the Federal Government passed legislation in March setting up the present emergency obstetric and pediatric care. Following passage of the congressional legislation, the Children's Bureau submitted the plan to the various state health departments. In Iowa the plan was in turn submitted to the Maternal and Child Health Committee of the Iowa State Medical Society. The consensus of the committee was that there was no alternative but to cooperate in the program and so made its recommendation to the House of Delegates at its meeting in Des Moines in April, where it was accepted without a dissenting voice. The Iowa State Department of Health, under the directorship of Dr. Walter L. Bierring as Commissioner, is merely acting in an administrative capacity to carry out a program of the Federal Government. Let us keep our facts straight and not place blame where it does not belong.

We are confident that physicians will not let the families of servicemen lack careful medical attention no matter how disturbed they may feel. But it would seem desirable, since the physicians are the ones who have been called upon to furnish their services in this program, that a little more consideration might be given to their feelings in the matter.

We believe it would help a great deal to correct injustices if in future legislation Congress would remove those passages which have the effect of lowering standards, and would also remove the particularly irritating statement which requires the physician to agree to accept no supplementary fee from the patient although he is able and willing to pay such fees.

A NEW SULFA DRUG—SULFAMERAZINE

The list of sulfonamide compounds isolated for clinical use in human beings has steadily grown since the original sulfanilamide was discovered some years ago. Latest in this line of succession is sulfamerazine, the monomethyl derivative of sulfadiazine.

Hall and Spink in the September 18 issue of *The Journal of the American Medical Association* report their results in treating 116 patients with this drug. In general they found it equally as efficacious as sulfadiazine. Evidences of toxicity were no greater than with sulfadiazine, and no instances of neurologic complications were encountered. One patient in the entire group developed leukopenia and granulopenia but recovered promptly with cessation of therapy. One patient developed gross hematuria and anuria and a second developed oliguria, but both recovered with appropriate therapy. Nausea and vomiting due to the drug were infrequent.

Apparently sulfamerazine is absorbed into the body more rapidly when given orally than is sulfadiazine, leading to higher concentrations in a shorter interval of time. Furthermore, sulfamerazine is retained in the system for a longer period of time than is sulfadiazine; hence the doses may be administered at less frequent intervals.

The authors again call attention to the importance of maintaining a urinary *p*H at 7.5 or higher by sodium bicarbonate medication and of maintaining a urinary output above 1,000 cubic centimeters per twenty-four hours. Observance of these precautions minimizes the risks of renal complications whether the drug employed is sulfadiazine or sulfamerazine.

Study of the types of cases presented by the authors indicates that the drug was given a thorough trial. There were 55 patients in the pneumonia group with three deaths. Each of the deaths would appear to have been unavoidable. Two infants with influenzal meningitis and three patients with meningococcic meningitis were treated successfully with sulfamerazine. Streptococcic infections responded satisfactorily, but the authors felt that sulfathiazole was still the drug of choice for Staphylococcus aureus infections. An attempt was made to sterilize the blood of a patient with subacute bacterial endocarditis due to the Streptococcus viridans. Twenty-five grams of sulfamerazine was given intravenously causing a maximum concentration in the blood of 68 milligrams of the free drug. The attempt was unsuccessful. Thus, once again it has been demonstrated that no cure for this disease exists at the present time.

It seems likely that in time sulfamerazine may replace sulfadiazine in routine therapeutics much the same as sulfathiazole and sulfadiazine replaced sulfanilamide and sulfapyridine. On the other hand, sulfamerazine does not seem to possess any startling advantages over sulfadiazine.

WARTIME NURSING IS DIFFERENT

[*Note: The* JOURNAL *has been asked to bring to the attention of its readers the following statement issued by the Directing Board of the War Manpower Commission's Procurement and Assignment Service for Physicians, Dentists, Veterinarians, Sanitary Engineers, and Nurses.*]

It is utterly impossible to provide the necessary volume of wartime nursing service on a peacetime basis. Places where nursing is going on as usual must share with others. Individual nurses who have not made adjustments to wartime needs for their service should understand the necessity for their participation.

The National Nursing Council has pointed out that the value of any national plan must be judged by its usefulness at the local level; that is, where nurses live and work—in the country, in the villages, towns, and cities of the nation.

Wartime nursing is different! That inescapable fact must be generally accepted by nurses, by physicians, and by hospital administrators. Energy and motion now spent in resistance to change must be released for the attack on war-created needs.

Nurses have wrought many changes, but not enough, in the pattern of nursing service since Pearl Harbor. "We just do the best we can" is heard more frequently than "This is our plan." Generally speaking, educational programs have received more thought than the service programs. Acceleration of the basic course in nursing is an outstanding example. State boards of nurse examiners have initiated others.

The principles of good nursing have not changed, but nurses are learning to concentrate on the essentials. In the analysis and administration of nursing service radical changes are being made. Tremendously valuable assistance in caring for patients is being secured from the Red Cross nurse's aides and other volunteers as well as from paid auxiliary workers.

Thus far nursing service has not been rationed; such rationing would be complicated by the differences in individual nurses and the degree of essentiality of needed services. The sharing of services is more difficult than the sharing of goods.

A critical shortage of nurses exists. Here are the facts:

Over 36,000 nurses are now with the armed forces and the Red Cross has accepted responsibility for the recruitment of an equal number by June 30, 1944. Our men are receiving skilled medical care of a high order as shown by the high percentage of recovery from injury. Skilled nursing is an important factor in such care. Then,

too, the very presence of nurses near the bases of military operations has repeatedly been described as a potent force in maintaining morale.

There has been an unprecedented increase in the use of civilian hospitals. Hospitals gave fourteen and a quarter million more days of care in 1942 than in the preceding year and the trend still is definitely upward. This is in keeping with the rapid growth of the Blue Cross (group hospitalization) plans and the Children's Bureau hospitalization program for the care of the families of service men.

Nursing is essential to the nation's health. The National Nursing Inventories (of nursing resources) of 1941 and 1943, by the United States Public Health Service, offer a comparison of data for the two years.

TABLE I
NATIONAL NURSING INVENTORIES

	1941	1943	
Total returns	289,286	259,174	
Active			
Institutional	81,708	77,704	
Public Health	17,766	18,900	
Industrial	5,512	11,220	
Private duty	46,793	44,299	
Other	21,276	18,476	
Inactive but available for nursing	25,252	38,746	(of these 23,576 are married and under 40)
Inactive, not available	90,979	49,829	
In Nurse Corps of Army and Navy		6,371 over 36,000	(precise data not available)

The total number of nurses graduated in the two years is well in excess of the number withdrawn for military service; this fact is not apparent in the inventory. The returns are apparently incomplete. Active nurses who did not return their questionnaires apparently did not realize the profound importance of the information requested. This information is the basis for present planning and safeguarding the future.

The relatively small decrease in the number of institutional nurses is much less significant than the increased use of hospitals in creating the serious shortage of nurses. The increased number of nurses in industrial nursing is, of course, not surprising.

The large number of inactive nurses who reported themselves available is encouraging, but—available for what? Full time? Part time? These nurses and others who are still "hidden" can make a valuable contribution to our nursing resources. Although it requires a little more planning, the service of two part-time nurses can equal that of one full-time one. Wartime nursing puts a tremendous burden on all the administrative nurses.

Here is the program of the new Nursing Division of the Procurement and Assignment Service. The Red Cross recruitment committees are pledged to recruit 36,000 nurses this year. The new division will (1) determine the availability for military service or essentiality for civilian service of all nurses eligible for military service and submit such determinations to the American Red Cross for use in procurement of nurses for the armed forces; (2) promote plans for maximum utilization of full-time nurses and those who are able to serve only part time; (3) develop and maintain a roster of all graduate registered nurses, and (4) develop and encourage sound methods of supplementing the work of nurses with non-professional personnel.

Through the War Manpower Commission, nursing will not only have the benefit of the experience of medicine in the procurement and assignment of physicians, but means will be found to interpret wartime nursing to physicians and their cooperation secured in effecting desirable wartime adjustments.

MINUTES OF MEETINGS OF STATE SOCIETY OFFICERS AND COMMITTEES

Meeting of the Executive Council
August 29, 1943

The Executive Council of the Iowa State Medical Society met at the Hotel Fort Des Moines in Des Moines Sunday, August 29, 1943, with the following persons present: L. R. Woodward, president; M. C. Hennessy, president-elect; R. L. Parker, secretary; O. J. Fay and W. A. Sternberg, trustees; C. H. Cretzmeyer, J. B. Knipe, J. E. Reeder, C. A. Boice, R. C. Gutch, J. G. Macrae, and R. L. Barnett, councilors. Also present by invitation were Doctors R. D. Bernard and C. T. Maxwell.

The meeting was called to order by the president, but since a quorum was not present, business matters were discussed and a vote was taken by mail later. The subject for discussion was the proposal of Hospital Service, Inc., of Iowa to extend its benefits. The Medical Economics Committee presented a recommendation that the insurance company be allowed to increase its benefits, but stipulated that payments for medical service should be made to the medical man performing the services. Dr. Reeder amended the recommendation to make the hospital the collecting agent for the physician, thus allowing the insurance company to pay the hospital as agent, rather than the individual physician. Those present approved of Dr. Reeder's amendment and it was submitted to the entire Executive Council by registered mail; the vote was unanimous in favor of the amended recommendation.

Dr. Bernard reported on the conference held in Minneapolis August 16 with members of Congress, farmers, business and professional men; the Executive Council also discussed the National Physicians Committee and the medical grants for old age pensioners. The meeting adjourned at 3:30 p. m.

Roster of Iowa Physicians in Military Service

As of September 24, 1943

Adair County

Cornell, D. D., Greenfield (APO 41, San Francisco, Cal.) ..... Capt., A.U.S.
Gantz, A. J., Greenfield (APO Los Angeles, Cal.) .. Capt., A.U.S.

Adams County

Willett, W. J., Carbon (Camp Maxey, Tex.) ..... Capt., A.U.S.

Allamakee County

Hogan, P. W., Waukon
Ivens, M. H., Waukon (Camp Shelby, La.)
Kiesau, M. F., Postville (Jefferson Barracks, Mo.) .. Major, A.U.S.
Rominger, C. R., Waukon (Camp Claiborne, La.) ..... A.U.S.

Appanoose County

Condon, F. J., Centerville (Owensboro, Ky.) .. Major, U.S.P.H.S.
Edwards, R. R., Centerville (Trenton, N. J.) ..... 1st Lt., A.U.S.
Huston, M. D., Centerville (Kansas City, Mo.) ..... Capt., A.U.S.

Audubon County

Koehne, F. D., Audubon (Oroville, Wash.) ..... Major, A.U.S.

Benton County

Koontz, L. W., Vinton (APO 726, Seattle, Wash.) .. Capt., A.U.S.
Senfeld, Sidney, Belle Plaine

Black Hawk County

Bickley, D. W., Waterloo (Camp Howze, Texas) .... 1st Lt., A.U.S.
Bickley, J. W., Waterloo (Fort Sill, Okla.) ..... 1st Lt., A.U.S.
Butts, J. H., Waterloo (Galveston, Texas) ... Lt. Comdr., U.S.N.R.
Cooper, C. N., Waterloo (Seattle, Wash.) ... Lt. Comdr., U.S.N.R.
Ellyson, C. D., Waterloo (Beaufort, S. C.) ..... Lt., U.S.N.R.
Ericsson, M. G., Cedar Falls (Carlisle Barracks, Penn.) ..... Capt., A.U.S.
Hartman, H. J., Waterloo (APO 33, San Francisco) Cal.) ..... Capt., A.U.S.
Henderson, L. J., Cedar Falls (Camp Roberts, Cal.) . Capt., A.U.S.
Hoyt, C. N., Cedar Falls (McClellan Field, Ala.) . 1st Lt., A.U.S.
Ludwick, A. L., Waterloo (APO 813, New York, N. Y.) ..... Capt., A.U.S.
Marquis, F. M., Waterloo (APO 180, Los Angeles, Cal.) ..... Capt., A.U.S.
O'Keefe, P. T., Waterloo (APO 79, Los Angeles, Cal.) ..... Capt., A.U.S.
Paige, R. T., LaPorte City (Des Moines, Ia.) . Lt. Comdr., U.S.N.R.
Rohlf, E. L., Jr., Waterloo (APO New York, N. Y.) ..... 1st. Lt., A.U.S.
Seibert, C. W., Waterloo (Colorado Springs, Colo.) .. Capt. A.U.S.
Smith, E. E., Waterloo (Scott Field, Ill.) ..... Major, A.U.S.
Smith, R. I., Waterloo (Reno, Nevada) ..... Capt., A.U.S.
Smith, R. G., Cedar Falls (APO 512, New York, N. Y.) ..... Major, A.U.S.
Trunnell, T. L., Waterloo (care P.M., New York, N. Y.) ..... Lt., U.S.N.R.

Boone County

Brewster, E. S., Boone (Camp Chaffee, Ark.) .... Major, A.U.S.
Healy, M. J., Boone
Shane, R. S., Pilot Mound (Des Moines, Ia.) Lt. Col., A.U.S.

Bremer County

Amlie, P. J., Tripoli (Fort Knox, Ky.)
Blum, O. S., Waverly (Fleet PO, New York, N. Y.) .. Lt., U.S.N.R.
Rathe, H. W., Waverly (Swannanoa, N. C.) ..... Capt., A.U.S.
Shaw, R. E., Waverly (Long Beach, Cal.) ..... 1st Lt., A.U.S.

Buchanan County

Barton, J. C., Independence (St. Paul, Minn.) ... Lt. Col., A.U.S.
Hersey, N. L., Independence (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Leehey, P. J., Independence (APO 957, San Francisco, Cal.) ..... Capt., A.U.S.
Loeck, J. F., Aurora (Camp Rucker, Ala.) ..... Capt., A.U.S.

Buena Vista County

Almquist, R. E., Albert City (Camp Shelby, Miss.) . Capt., A.U.S.
Brecher, P. W., Storm Lake (Camp White, Ore.) . Lt. Col., A.U.S.
Mailliard, R. E., Storm Lake (Camp Bowie, Tex.) . Lt. Col., A.U.S.
Shope, C. D., Storm Lake (Fort Des Moines, Ia.) .. Capt., A.U.S.
Witte, H. J., Marathon (Banning, Cal.) ..... Major, A.U.S.

Butler County

Anderson, B. V., Greene (Fleet PO, Seattle, Wash.) .... U.S.N.R.
James, R. A., Allison (Mare Island, Cal.)
Rolfs, F. O., Parkersburg (Springfield, Mo.)

Calhoun County

Grinley, A. V., Rockwell City (APO 507, New York, N. Y.) ..... Capt., A.U.S.
Hobart, F. W., Lake City (Camp Grant, Ill.) .... Capt., A.U.S.
Peek, L. H., Lake City (Jefferson Barracks, Mo.) .. Capt., A.U.S.
Stevenson, W. W., Rockwell City (Port Hueneme Cal.) ..... Lt. Comdr., U.S.N.R.
Weyer, J. J., Lohrville (Camp Carson, Colo.) .... 1st Lt., A.U.S.

Carroll County

Anneberg, A. R., Carroll (Camp Barkeley, Texas)
Anneberg, W. A., Carroll
Cochran, J. L., Carroll (Gulfport, Miss.)
Cross, D. L., Coon Rapids ..... Lt., U.S.N.R.
Freedland, Maurice, Coon Rapids
Morrison, J. R., Carroll (Camp Maxey, Texas) ..... Capt., A.U.S.
Morrison, R. B., Carroll (APO 634, New York, N. Y.) Capt., A.U.S.
Pascoe, P. L., Carroll (Bowman Field, Ky.) ..... Capt., A.U.S.
Scannell, R. C., Carroll (APO, New York, N. Y.)
Tindall, R. N., Coon Rapids (APO 944, Seattle, Wash.) ..... Major, A.U.S
Wyatt, M. R., Manning (Desert Center, Cal.) .... 1st Lt., A.U.S.

Cass County

Egbert, D. S., Atlantic (Fort Snelling, Minn.) Major, A.U.S.
Longstreth, C. M., Atlantic (Norman, Okla) . Lt. Comdr., U.S.N.R.
Needles, R. M., Atlantic (Davis, Cal.) ..... Capt., A.U.S.
Petersen, M. T., Atlantic (Topeka, Kan.) ..... Capt., A.U.S.

Cedar County

Laughlin, R. M., Tipton (San Diego, Cal.) ..... Lt., U.S.N.R.
Mosher, M. L., West Branch (Camp Gruber, Okla.) ..... Capt., A.U.S.
O'Neal, H. E., Tipton (Camp Polk, La.) ..... Lt. Col., A.U.S.

Cerro Gordo County

Adams, C. O., Mason City (Brigham City, Utah) ... Capt., A.U.S.
Egloff, W. C., Mason City (Mesa, Ariz.)
Flickinger, R. R., Mason City (Carlisle Barracks, Penn.) ..... 1st. Lt., A.U.S.
Hale, A. E., Dougherty (Camp Hale, Colo.)
Harris, R. H., Mason City (Columbus, Ohio)
Harrison, G. E., Mason City (Boston, Mass.) ..... Col., A.U.S.
Houlahan, J. E., Mason City (Sacramento, Cal.)
Lannon, J. W., Clear Lake (APO 758, New York, N. Y.) ..... Capt., A.U.S.
Long, D. L., Mason City (Santa Ana, Cal.)
Marinos, H. G., Mason City (APO 25, San Francisco, Cal.) ..... Capt., A.U.S.
Sternhill, Irving, Mason City (APO New York, N. Y.)

Cherokee County

Bullock, G. D., Washta (Camp Livingston, La.) .... Capt., A.U.S.
Ihle, C. W., Jr., Cleghorn (Camp San Luis Obispo, Cal.) ..... Major, A.U.S.
Noble, R. P., Cherokee (APO 634, New York, N. Y.) . Capt., A.U.S.
Swift, C. H., Jr., Marcus (Fort Bliss, Texas) .... Capt., A.U.S.

Chickasaw County

Caulfield, J. D., New Hampton (Denver, Colo.) .... Capt., A.U.S.
Murphey, A. L., Fredericksburg (APO 3470, San Francisco, Cal.) ..... Capt., A.U.S.
O'Connor, E. C., New Hampton (Camp Crowder, Mo.) ..... Capt., A.U.S.
Richmond, P. C., New Hampton (Camp Gruber, Okla.) ..... Capt. A.U.S.

Clay County

Adams, G. W., Royal (Fort Clayton, Panama Canal Zone)
Edington, F. D., Spencer (Lowry Field, Colo.) ..... Col., A.U.S.
Jones, C. C., Spencer (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
King, D. H., Spencer (Spokane, Wash.) ..... Capt., A.U.S.

Clayton County

Anderson, H. M., Strawberry Point (Camp Crowder, Mo.) ..... 1st Lt., A.U.S.
Rhomberg, E. B., Guttenberg (Camp Wallace, Texas) . Capt., A.U.S.

Clinton County

Amesbury, H. A., Clinton (Portland, Ore.) ..... Capt., A.U.S.
Burke, J. C., Clinton (Great Bend, Kan.) ..... A.U.S.
Christensen, E. D., Grand Mound (Iowa City)
Ellison, G. M., Clinton (Shreveport, La.) ..... Capt., A.U.S.
Hill, D. E., Clinton
King, R. C., Clinton (Camp Chaffee, Ark.)
Lenaghan, R. T., Clinton (Fleet PO, San Francisco, Cal.) ..... U.S.N.R.
Meyer, A. K., Clinton (Denver, Colo.)
Norment, J. E., Clinton (Mare Island, Cal.)
Riedesel, E. V., Wheatland (Fort Douglas, Utah)
Snyder, D. C., De Witt
Van Epps, E. F., Clinton (Palm Springs, Cal.) ..... Capt., A.U.S.
Waggoner, C. V., Clinton (Seattle, Wash.) .. Lt. Cmdr., U.S.N.R.

Crawford County

Fee, C. H., Denison (Dunnellon, Fla.) ..... Capt., A.U.S.
Grau, A. H., Denison ..... Lt. Comdr., U.S.N.R.
Maire, E. J., Vail (San Francisco, Cal.)
Wetrich, M. F., Manilla (San Antonio, Tex.)

Dallas-Guthrie Counties

Byrnes, A. W., Guthrie Center (Fort Custer, Mich.) . Major, A.U.S.
Fail, C. S., Adel (Pacific Beach, Wash.) ..... Lt., U.S.N.R.
Margolin, J. M., Perry (Camp Cooke, Cal.) ..... Capt., A.U.S.
McGilvra, R. I., Guthrie Center (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Mullmann, A. J., Adel (Washington, D. C.) ..... Capt., A.U.S.
Nicoll, C. A., Panora (Camp Chaffee, Ark.) ..... Capt., A.U.S.
Osborn, C. R., Dexter (San Francisco, Cal.) ..... Lt., U.S.N.R.
Todd, D. W., Guthrie Center (Camp McCoy, Wis.) ..... 1st Lt., A.U.S.
Wilke, F. A., Woodward (APO 627, New York, N. Y.) ..... 1st Lt., A.U.S.

Davis County

Fenton, C. D., Bloomfield (Carlisle Barracks, Pa.)..Capt., A.U.S.
Gilfillan, G. W., Bloomfield (Oceanside, Cal).Lt. Comdr., U.S.N.R.

Decatur County

Doss, W. N., Leon (APO 924, San Francisco, Cal.)
Gamet, E. E., Lamoni (Tacoma, Wash.)

Delaware County

Baumgarten, Oscar, Earlville (APO 307, Los Angeles, Cal.).A.U.S.
Clark, R. E., Manchester (Fort Riley, Kan.)....1st Lt., A.U.S.

Des Moines County

Eigenfeld, M. L., Burlington (Camp Bowie, Texas) .....1st Lt., A.U.S.
Heitzman, P. O., Burlington (Fort Baker, Cal.)....Capt., A.U.S.
Jenkins. G. D., Burlington (West Point, N. Y.)....Lt. Col. A.U.S.
Lohmann, C. J., Burlington (Fort Lewis, Wash.)..Major, A.U.S.
McKitterick, J. C., Burlington (Saunderstown, R. I.) .....Lt. Comdr., U.S.N.R.
Moerke, R. F., Burlington (Abilene, Texas).....1st Lt., A.U.S.
Sage, E. C., Burlington.....Lt. Comdr., U.S.N.R.

Dickinson County

Buchanan, J. J., Milford (Fleet PO, New York, N. Y.) .....Lt. Comdr., U.S.N.R.
Henning, G. G., Milford (Camp Adair, Ore.).....Major, A.U.S.
Nicholson, C. G., Spirit Lake (Sawtelle, Cal.).....Capt., A.U.S.
Rodawig, D. F., Spirit Lake (Fort Hancock, N. J.) .....Capt., A.U.S.

Dubuque County

Beddoes, M. G., Cascade (Kansas City, Mo.)....Capt., A.U.S.
Conzett, D. C., Dubuque (Fort Riley, Kan.).....Lt. Col., A.U.S.
Cunningham, J. C., Dubuque (Fairfield, Ohio)....Capt., A.U.S.
Edstrom, Henry, Dubuque (Clinton, Iowa).....Major, A.U.S.
Entringer, A. J., Dubuque (APO 41, San Francisco, Cal.) .....Capt., A.U.S.
Hall, C. B., Dubuque (San Antonio, Texas).....1st Lt., A.U.S.
Knoll, A. H., Dubuque (San Francisco, Cal.)....Major, A.U.S.
Langford, W. R., Epworth (APO 948, Seattle, Wash.) .....Capt., A.U.S.
Lavery, H. B., Dubuque (Washington, D. C.)....Lt. Col., A.U.S.
Leik, D. W., Dubuque (Wichita Falls, Tex.)....1st Lt., A.U.S.
Mueller, J. J., Dubuque (Hattiesburg, Miss.)....1st Lt., A.U.S.
Olson, P. F., Dubuque (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.
Painter, R. C., Dubuque (care PM, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Paulus, J. W., Dubuque (Camp Merced, Cal.)....1st Lt., A.U.S.
Plankers, A. G., Dubuque (APO New York, N. Y.) Major, A.U.S.
Quinn, F. P., Dubuque (Carlisle Barracks, Penn.).Major, A.U.S.
Scharle, Theodore, Dubuque (Fort Lawton, Wash.) Capt., A.U.S.
Schueller, C. J., Dubuque (APO 758, New York, N. Y.) .....1st Lt., A.U.S.
Sharpe, D. C., Dubuque (Fort Leonard Wood, Mo.)..Major, A.U.S.
Smith, C. W., Dubuque (Fleet PO, San Francisco, Cal. .....Lt., U.S.N.R.
Steffens, L. F., Dubuque (Camp Chaffee, Ark.)..Lt. Col., A.U.S.
Straub, J. J., Dubuque (care PM, San Francisco, Cal.) .....Lt., U.S.N.R.
Ward, D. F., Dubuque (Rochester, Minn.)...Lt. Comdr., U.S.N.R.

Emmet County

Clark, J. P., Estherville (Fort Sam Houston, Texas) .....Capt., A.U.S.
Miller. O. H., Estherville (Gowen Field, Idaho) .....Lt. Comdr., U.S.N.R.

Fayette County

Camp, D. E., West Union (Camp Blanding, Fla.)...Capt., A.U.S.
Gallagher, J. P., Oelwein (Pensacola, Fla.).....Lt., U.S.N.R.
Henderson, W. B., Oelwein (St. Louis, Mo.).....Major, A.U.S.
Hess, A. M., West Union (Albuquerque, N. Mex.)..1st Lt., A.U.S.
Moen, H. P., West Union (Camp Barkeley, Texas)..Capt., A.U.S
Sulzbach, J. F., Oelwein

Floyd County

Baltzell, W. C., Charles City (Camp McCoy, Wis.)..Major, A.U.S.
Flater, N. C., Floyd (APO Los Angeles, Cal.)....Capt., A.U.S.
Knight, R. A., Rockford (San Diego, Cal.).....Lt., U.S.N.R.
Mackie, D. G., Charles City (Topeka, Kan.)....1st Lt., A.U.S.
Miner, J. B., Jr., Charles City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Tolliver, H. A., Charles City (San Pedro, Cal.)....Capt., A.U.S.

Franklin County

Byers, W. L., Sheffield (Jefferson Barracks, Mo.).1st Lt., A.U.S.
Hedgecock, L. E., Hampton (care PM, San Francisco, Cal.) .....Lt., U.S.N.R.
Randall, W. L., Hampton (Oceanside, Cal.).....Lt., U.S.N.R.
Walton, S. G., Hampton (Camp Robinson, Ark.) 1st Lt., A.U.S.

Fremont County

Kerr, W. H., Hamburg (Camp Phillips, Kan.)....Capt., A.U.S.
Marrs, W. D., Tabor (APO 846, New York, N. Y.) .....1st Lt., A.U.S.
Wanamaker, A. R., Hamburg (Los Angeles. Cal.)..Capt., A.U.S.

Greene County

Cartwright, F. P., Grand Junction (Casper, Wyo.) Capt., A.U.S.
Castles, W. A., Jr., Rippey (APO San Francisco, Cal.) .....Capt. A.U.S.
Hanson, L. C., Jefferson (Camp Rucker, Ala.)...1st Lt., A.U.S.
Jongewaard, A. J., Jefferson (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.
Limberg, J. I., Jr., Jefferson (APO San Francisco, Cal.) .....Capt., A.U.S.
Lohr, P. E., Churdan (San Diego, Cal.).....A.U.S.

Grundy County

Rose, J. E., Grundy Center (Norman, Okla.) Lt. Comdr., U.S.N.R.

Hamilton County

Buxton, O. C., Webster City (Seattle, Wash.)...1st Lt., A.U.S.
Howar, B. F., Jewell (APO 514, New York, N. Y.) Major, A.U.S.
James, D. W., Kamrar (APO 700, New York, N. Y.) .....Capt., A.U.S.
Lewis, W. B., Webster City (APO 763, New York, N. Y.) .....Capt., A.U.S.
Mooney, F. P. Jewell (APO New York, N. Y.)
Paschal, G. A., Williams (Camp Barkeley, Texas)..Capt., A.U.S.
Patterson, R. A., Webster City (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Ptacek, J. L., Webster City (Greenwood, S. Car.).....A.U.S.
Thompson, E. D., Webster City (Biloxi, Miss.)..Capt., A.U.S.

Hancock-Winnebago Counties

Dolmage, G. H., Buffalo Center (Nashville, Tenn.)..Capt., A.U.S.
Dulmes, A. H., Klemme (Brigham City, Utah).....Capt., A.U.S.
Eller, L. W., Kanawha (APO 302, New York, N. Y.) .....1st. Lt., A.U.S
Shaw, D. F., Britt (Tucson, Ariz.).....A.U.S.
Thomas, C. W., Forest City (Camp Crowder, Mo.)..Capt., A.U.S.

Hardin County

Burgess, A. W., Iowa Falls (Mare Island, Cal.).....Lt., U.S.N.R.
Houlihan, F. W., Ackley (APO 860, New York, N. Y.) .....1st. Lt., A.U.S.
Jansonius, J. W., Eldora (APO 4834, New York, N. Y.) .....Capt., A.U.S.
Johnson, R. J., Iowa Falls (Lawton, Okla.).....Capt., A.U.S.
Johnson, W. A., Alden (Pendleton, Ore.)
Shurts, J. J., Eldora (Camp Roberts, Cal.).....1st Lt., A.U.S.
Todd, V. S., Eldora (APO 545, Los Angeles, Cal.)...Capt., A.U.S.

Harrison County

Bergstrom, A. C., Missouri Valley (Ft. Benning, Ga.)....A.U.S.
Burbridge, G. E., Logan (Ft. Benning, Ga.).....Major, A.U.S.
Byrnes, C. W., Dunlap (Jefferson Barracks, Mo.)
Heise, C. A., Jr., Missouri Valley
Tamisiea, F. X., Missouri Valley (Jefferson Barracks, Mo.) .....1st Lt., A.U.S.

Henry County

Brown, W. B., Mount Pleasant (APO 29, New York, N. Y.) .....Major, A.U.S.
Cogan, Samuel, Mt. Pleasant.....A.U.S.
Dwankowski, Carl, Mt. Pleasant (Carlisle Barracks, Pa.) .....1st. Lt., A.U.S.
Gloeckler, B. B., Mount Pleasant (Laurel, Md.).....Capt., A.U.S.
Hartley, B. D., Mount Pleasant (Yuma, Ariz.)....Capt., A.U.S.
Megorden, W. H., Mount Pleasant (Ogden, Utah) 1st Lt., A.U.S.
Ristine, L. P., Mount Pleasant (Sioux Falls, S. Dak.) .....Major, A.U.S.

Howard County

Buresh, Abner, Lime Springs (San Diego, Cal.)
Nierling, P. A., Cresco (Camp Barkeley, Tex.)..Capt., A.U.S.

Humboldt County

Arent, A. S., Humboldt (Stockton, Cal.).....Capt., A.U.S.
Coddington, J. H., Humboldt (Fresno, Cal.).....1st Lt., A.U.S.

Ida County

Dressler, J. B., Ida Grove (APO 4713, San Francisco, Cal.) .....Capt., A.U.S.
Harris, H. H., Battle Creek (Omaha, Neb.)....1st Lt., A.U.S.
Martin, J. W., Holstein (Montgomery, Ala.).....Capt., A.U.S.

Iowa County

McDaniel, J. D., Marengo (Fort Clark, Texas).....A.U.S.
Miller, D. F., Williamsburg (Seattle, Wash.).....Lt., U.S.N.R.

Jackson County

Swift, F. J., Jr., Maquoketa (Camp Atterbury, Ind.) Major, A.U.S.

Jasper County

Doake, Clarke, Newton.....1st Lt., A.U.S.
Minkel, R. M., Newton (APO New York, N. Y.) 1st Lt., A.U.S.
Ritchey. S. J., Newton.....Major, A.U.S.

Jefferson County

Castell, J. W., Fairfield (Fort Devens, Mass.).....Capt., A.U.S.
Gittler, Ludwig, Fairfield (APO 1001, New York, N. Y.) .....Major, A.U.S.
Graber H. E., Fairfield (Carlisle Barracks, Penn.) Major, A.U.S.
Taylor, I. C., Fairfield (Washington, D. C.)....1st Lt., A.U.S.

Johnson County

Agnew, J. W., Iowa City (Camp Phillips, Kan.)..1st Lt., A.U.S.
Allen, J. H., Iowa City (Scott Field, Ill.).....Capt., A.U.S.
Anderson, E. N., Iowa City (Clinton, Iowa).....Major, A.U.S.
Boiler, W. F., Iowa City (Fort Leonard Wood, Mo.) .....Major, A.U.S.
Boyd, E. J., Iowa City (Colorado Springs, Colo.).1st Lt., A.U.S.
Brinkhous, K. M., Iowa City (Fort Houston, Texas) Lt. Col., A.U.S.
Bunge, R. G., Iowa City (Biloxi, Miss.).....1st Lt., A.U.S.
Callahan, G. D., Iowa City (El Toro, Cal.).....Lt., U.S.N.R.
Cooper, W. K., Iowa City (Jefferson Barracks, Mo.) Capt., A.U.S.
Crowell, E. A., Iowa City (Spokane, Wash.)..1st Lt., A.U.S.
Diddle, A. W., Iowa City (Key West, Fla.)..Lt. (jg), U.S.N.R.
Dorner, R. A., Iowa City (APO 534, New York, N. Y.) .....Capt., A.U.S.
Elmquist, H. S., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Emmons, M. B., Iowa City (Fort Sam Houston, Texas) .....1st Lt., A.U.S.
Flynn, J. E., Iowa City (Hot Springs, Ark.).....A.U.S.

Fourt, A. S., Iowa City (APO 1001, New York, N. Y.) ..... Col., A.U.S.
Francis, N. L., Iowa City (Annapolis, Md.) Lt. (jg), U.S.N.R.
Galinsky, L. J., Oakdale (Camp Crowder, Mo.) ..... Capt., A.U.S.
Garlinghouse, R. O., Iowa City (Fort Snelling, Minn.) .. A.U.S.
Hardin, R. C., Iowa City (APO 1001, New York, N. Y.) .... A.U.S.
Hartung, Walter, Iowa City (Camp Carson, Colo.) .. Capt., A.U.S.
Hessin, A. L., Iowa City ..... 1st Lt., A.U.S.
Irwin, R. L., Iowa City (Iowa City, Iowa) .. Lt. Comdr., U.S.N.R.
January, L. E., Iowa City (Moses Lake, Wash.) .... Capt., A.U.S.
Keislar, H. D., Iowa City (Camp Barkeley, Tex.) .. 1st Lt., A.U.S.
Lage, R. H., Iowa City (Santa Barbara, Cal.) ..... Lt., U.S.N.R.
Longwell, F. H., Iowa City (APO 505, New York, N. Y.) ..... Capt., A.U.S.
Nagyfy, S. F., Iowa City (Memphis, Tenn.) ... Lt. (jg), U.S.N.R.
Newman. R. W., Iowa City (Fleet PO, New York, N. Y.) ..... Lt., U.S.N.R.
Parkin, G. L., Iowa City (Carlisle Barracks, Pa.) .. 1st Lt., A.U.S.
Paulus, E. W., Iowa City (APO 1001, New York, N. Y.) ..... Lt. Col., A.U.S.
Petersen, V. W., Iowa City (APO 1001, New York, N. Y.) ..... Col., A.U.S.
Sells, R. L., Jr., Iowa City (Hamilton Field, Cal.) .1st Lt., A.U.S.
Smith, H. F.. Iowa City (Great Lakes, Ill.) .Lt. Comdr., U.S.N.R.
Springer, E. W., Iowa City (APO 622, Miami, Fla.) .1st Lt., A.U.S.
Stadler, H. E., Iowa City (Washington, D. C.) .... 1st Lt., A.U.S.
Staggs, W. A., Iowa City (Camp Robinson, Ark.) .. 1st Lt., A.U.S.
Stephens, R. L., Iowa City (Orlando, Fla.) ..... Capt., A.U.S.
Stump, R. B., Iowa City (Fort Leonard Wood, Mo.) .. A.U.S.
Titus, E. L., Iowa City (Fort Banks, Mass.) ..... Col., A.U.S.
Vest, W. M., Iowa City (APO 928, San Francisco, Cal.) ..... Capt., A.U.S.
Ward, R. H., Iowa City (Iowa City, Iowa) ..... U.S.N.R.
Ziffren, S. E., Iowa City (Springfield, Mo.) .... 1st. Lt., A.U.S.

Junior Members

Adams, M. P., Iowa City
Ahrens, J. H., Iowa City (APO San Francisco, Cal.) ..... A.U.S.
Ball, A. L., Iowa City (Camp Polk, La.) ..... Major, A.U.S.
Barrent, M. E., Iowa City (Camp Tyson, Tenn.) .. Capt., A.U.S.
Black, N. M., Iowa City (McChord Field, Wash.) 1st Lt., A.U.S.
Blair, J. D., Iowa City (APO San Francisco, Cal.) .Major, A.U.S.
Boyd, R. J., Iowa City (Spokane, Wash.) ..... Capt., A.U.S.
Brintnall, E. S., Iowa City (Colorado Springs, Colo.) ..... 1st Lt., A.U.S.
Burr, S. P., Iowa City (APO San Francisco, Cal.) .1st Lt., A.U.S.
Connole J. F., Iowa City (Camp Bowie, Texas) .. 1st Lt., A.U.S.
Couch, O. A., Iowa City (Camp Van Dorn, Miss.) .. 1st Lt., A.U.S.
Decker, C. E., Iowa City (Oklahoma City, Okla.) .. 1st Lt., A.U.S.
Donnelly B. A., Iowa City (APO San Francisco, Cal.) ..... 1st Lt., A.U.S.
Ehrenhaft, J. L., Iowa City (March Field, Cal.) .. 1st Lt., A.U.S.
Englerth, F. L., Iowa City (APO San Francisco, Cal.) ..... Capt., A.U.S.
Freiberg, M., Iowa City (Jefferson Barracks, Mo.) ..... A.U.S.
Glassman A. L., Iowa City (Palm Springs, Cal.) 1st Lt., A.U.S.
Gilliland, C. H., Iowa City (Great Lakes, Ill.) Lt. (jg), U.S.N.R.
Hamilton, H. E., Iowa City (Chicago, Ill.) ..... 1st Lt., A.U.S.
Harms, G. E., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Hovis, Wm., Iowa City (San Diego, Cal.) ..... Lt. (jg), U.S.N.R.
Ide, L. W., Iowa City (Fort Warren, Wyo.) ..... 1st Lt., A.U.S.
Jacobs, C. A., Iowa City (APO New York, N. Y.) .Major, A.U.S.
Kaplan, Nathan, Iowa City (Carlisle Barracks, Pa.) ..... 1st Lt., A.U.S.
Keil, P. G., Iowa City (Sioux City, Iowa) ..... 1st Lt., A.U.S.
Kelberg, M. R., Iowa City (Treasure Island, Cal.) ..... Lt. (jg), U.S.N.R
Keleher, M. F., Iowa City (Great Lakes, Ill.) .. Lt. (jg), U.S.N.R.
Keohen, G. F., Iowa City (Camp Grant, Ill.) .... Capt., A.U.S.
Kugler, F. E., Iowa City (Fort Warren, Wyo.) .... Capt., A.U.S.
Lowry, F. C., Iowa City (Sioux Falls, S. D.) .... 1st Lt., A.U.S.
McCann, J. P., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
McQuiston, W. O., Iowa City (Chicago, Ill.) .... 1st Lt., A.U.S.
Moen, B. H., Iowa City
Moon, R. E., Iowa City (Camp Bowie, Texas) .... 1st Lt., A.U.S.
Odell, Lester. Iowa City (Alameda, Cal.) ..... Lt. (jg). U.S.N.R.
Phillips, R. M., Iowa City (San Francisco, Cal.) 1st Lt., A.U.S.
Pulliam. R. L., Iowa City (Portland, Ore.) ..... Major, A.U.S.
Randall, C. G., Iowa City
Randall, R. G., Iowa City (Waterloo, Iowa) ..... Capt. A.U.S.
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.) ..... 1st Lt., A.U.S.
Russin, L. A., Iowa City (Fort Blanding, Fla.) .... Capt., A.U.S.
Saar, J. L., Iowa City (APO New York, N. Y.) .. Capt., A.U.S
Sawtelle, W. W., Iowa City
Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Shand, J. A., Iowa City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Shapiro, S. I., Iowa City
Simpson, F. E., Iowa City (Camp Grant, Ill.) ..... A.U.S
Skewis, J. E., Iowa City (Rochester, N. Y.) .. Lt. (jg), U.S.N.R.
Skouge, O. T., Iowa City
Towle, R. A., Iowa City (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Warren, R. F., Iowa City (Santa Barbara, Cal.) ..... A.U.S.
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.) ..... 1st. Lt., A.U.S.
Wicks, W. J., Iowa City (Camp Crowder, Mo.) .... Capt., A.U.S.
Williams, L. A., Iowa City (Treasure Island, Cal.) .1st Lt., A.U.S.
Willumsen, H. C., Iowa City (Chico, Cal.) ..... Capt., A.U.S.
Wolkin, J., Iowa City (San Antonio, Texas) .... Capt., A.U.S.
Yetter, W. L., Iowa City (APO New York, N. Y.) Capt., A.U.S.
Zahrt, N. E., Iowa City (Miami Beach, Fla.) .... 1st Lt., A.U.S.
Zimmerman, H. A., Iowa City (Santa Ana, Cal.) .. 1st Lt., A.U.S.

Keokuk County

Bjork, Floyd, Keota (Camp Barkeley, Texas) ..... A.U.S.
Doyle, J. L., Sigourney (Camp Barkeley, Texas) ..... A.U.S.
Engelmann, A. T., What Cheer (Camp Polk, La.) Capt., A.U.S.
Graham, J. A., Gibson (Needles, Cal.) ..... 1st. Lt., A.U.S.
Montgomery, G. E., Keota (Fort Sam Houston, Texas) .... A.U.S.
Wiley, Dudley, Hedrick (Mason City, Wash.)

Kossuth County

Clapsaddle, D. W., Burt (Ft. Benning, Ga.) ..... 1st Lt., A.U.S.
Williams, R. L., Lakota (San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.

Lee County

Ashline, G. H., Keokuk (Indiantown Gap, Pa.) .... Capt., A.U.S.
Cleary, H. G., Fort Madison (APO 726, Seattle, Wash.) ..... Capt., A.U.S.
Cooper. R. E., Keokuk (Fort Leonard Wood, Mo.)
Johnstone, A. A., Keokuk (Camp Robinson, Ark.) .... Col., A.U.S.
McKee, T. L., Keokuk (APO 922, San Francisco, Cal.) ..... Major, A.U.S.
Pumphrey, L. C., Keokuk (Ft. Leonard Wood, Mo.) ..... Major, A.U.S.
Rankin, J. R., Keokuk (Davenport, Iowa) ..... Lt., U.S.N.R.
Steffey, F. L., Keokuk (Fort Snelling, Minn.)
Van Werden, B. D., Keokuk (Fort Jackson, S. C.) .. Capt., A.U.S.

Linn County

Andre, G. R., Lisbon (Camp Barkeley, Texas) .... Major, A.U.S.
Berney, P. W., Cedar Rapids (San Francisco, Cal.) Capt., A.U.S.
Block, W. M., Cedar Rapids (Ft. Lewis, Wash.) .... 1st. Lt., A.U.S.
Chapman, R. M., Cedar Rapids (Chicago, Ill.) ..... Capt., A.U.S.
Coughlan, V. H., Coggon (Fort Snelling, Minn.)
Courter, W. O., Springville (APO 464, New York, N. Y.) ..... Capt., A.U.S.
Crew, P. I., Marion (Northfield, Vt.) ..... Capt., A.U.S.
Dunn, F. C., Cedar Rapids (Chicago, Ill.) ..... Capt., A.U.S.
Halpin, L. J., Cedar Rapids (Atlanta, Ga.) .... Major, A.U.S.
Hecker J. T., Cedar Rapids (Pecos, Texas) ..... 1st Lt., A.U.S.
Jirsa, H. O., Cedar Rapids (APO 871, New York, N. Y.) ..... Major, A.U.S.
Keith, J. J., Marion (APO 502, San Francisco, Cal.) ..... Major, A.U.S.
Kieck, E. G., Cedar Rapids (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R
Kruckenberge, W. G., Mount Vernon (Rochester Minn.) ..... Lt., U.S.N.R.
Locher, R. C., Cedar Rapids (Merced, Cal.) ..... Major, A.U.S.
MacDougal, R. F., Cedar Rapids (Carlisle Barracks, Pa.) ..... Capt., A.U.S.
McConkie, E. B., Cedar Rapids (Sioux Falls, S. Dak.) ..... Major, A.U.S.
McQuiston, J. S., Cedar Rapids (Salina, Kan.) .. Major, A.U.S.
Meffert, C. B., Cedar Rapids (Carlisle Barracks, Pa.) ..... Major, A.U.S.
Netolicky, R. Y., Cedar Rapids (San Francisco, Cal.) .Lt., U.S.N.R.
Noble, W. C.. Cedar Rapids (Camp San Luis Obispo, Cal.) ..... 1st. Lt., A.U.S.
Noe, C. A., Cedar Rapids (Hot Springs, Ark.) .. Major, A.U.S.
Parke, John, Cedar Rapids (APO 34, New York, N. Y.) ..... Capt., A.U.S.
Proctor, R. D., Cedar Rapids (Corpus Christi, Texas) ..... Lt. Comdr., U.S.N.R.
Redmond, J. J., Cedar Rapids (APO 813, New York, N. Y.) ..... Major, A.U.S.
Rieniets, J. H., Cedar Rapids (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr, U.S.N.R.
Sedlacek, L. B., Cedar Rapids (Camp Shelby, Miss.) ..... Lt. Col., A.U.S.
Smrha, J. A., Cedar Rapids (APO 4665, San Francisco, Cal.) ..... Capt., A.U.S.
Stark, C. H., Cedar Rapids (Denver, Colo.) ..... Capt., A.U.S.
Sulek, A. E., Cedar Rapids (APO, 957, San Francisco, Cal.) ..... Major, A.U.S.
Woodhouse, K. W., Cedar Rapids (APO 34, New York, N. Y.) ..... Lt. Col., A.U.S.
Wray, R. M., Cedar Rapids (APO 958, San Francisco, Cal.) ..... Major, A.U.S.
Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.

Louisa County

DeYarman, K. T., Morning Sun (San Antonio, Texas) ..... 1st Lt.. A.U.S.
Tandy, R. W., Morning Sun (Norfolk, Va.) .. Lt. Comdr., U.S.N.R.

Lucas County

Lister, K. E., Chariton (Fort Snelling. Minn.)

Lyon County

Cook, S. H., Rock Rapids (Memphis, Tenn.) ..... Capt., A.U.S.
‡Corcoran, T. E., Rock Rapids (APO New York) N. Y.) ..... Capt. A.U.S.
Moriarty, J. F., Rock Rapids (APO 700, New York, N. Y.) ..... Capt. A.U.S.

Madison County

Boden, H. N., Truro (Fresno, Cal.)
Chesnut, P. F.. Winterset (Portland, Ore.) ..... 1st Lt., A.U.S.
Wicks, R. L., Winterset (Portland. Ore.)
Veltman, J. F., Winterset (APO 957, San Francisco, Cal.) ..... Capt., A.U.S.

Mahaska County

Bennett, G. W., Oskaloosa (Fort Riley, Kan.)..Major, A.U.S.
Bos, H. C., Oskaloosa.....Major, A.U.S.
Campbell, W. V., Oskaloosa (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Clark, G. H., Oskaloosa (Norman, Okla.)..Lt. Comdr., U.S.N.R.
Greenlee, M. R., Oskaloosa (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Lemon, K.M., Oskaloosa.....1st Lt., A.U.S.
Zager, L. L., Oskaloosa (Camp Rucker, Ala.)....1st. Lt., A.U.S.

Marion County

Elliott, V. J., Knoxville (Portland, Ore.).....Capt., A.U.S.
Mater, D. A., Knoxville (Lincoln, Neb.).....Major, A.U.S.
Ralston, F. P., Knoxville (Indio, Cal.).....Capt., A.U.S.
Schiek, C. M., Knoxville.....Lt. Comdr., U.S.N.R.
Schroeder, M. C., Pella (Camp Uhlan, Texas)....1st Lt., A.U.S.
Williams, D. B., Knoxville.....Capt. A.U.S.

Marshall County

Carpenter, R. C., Marshalltown (APO New York, N. Y.) .....Capt., A.U.S.
Marble, E. J., Marshalltown (San Diego, Cal.)....Lt., U.S.N.R.
Marble, W. P., Marshalltown (Walla Walla, Wash.) Capt., A.U.S.
Meyer, M. G., Marshalltown (APO 181, Los Angeles, Cal.) .....Capt., A.U.S.
Noonan, J. J., Marshalltown (San Diego, Cal.)..Major. A.U.S.
Phelps, R. E., State Center (Fort Ord, Cal.).....Capt., A.U.S.
Sinning, J. E., Melbourne (Camp Robinson, Ark.)..Capt., A.U.S.
Smith, E. M., State Center (Sioux City, Ia.).....Lt. Col., A.U.S.
Stegman, J. J., Marshalltown (Portland, Ore.)..Capt., A.U.S.
Wells, R. C., Marshalltown (Gowen Field, Idaho) 1st Lt., A.U.S.
Wolfe, O. D., Marshalltown (Fort Riley, Kan.)..Capt., A.U.S.
Wolfe. R. M., Marshalltown (Cherry Point, N. C.) .....Lt., U.S.N.R.

Mills County

DeYoung, W. A., Glenwood (APO 513, New York, N. Y.) .....Capt., A.U.S.
Magaret, E. C., Glenwood (Lubbock, Texas)....1st Lt., A.U.S
Shonka, T. E., Malvern (Camp Pickett. Va.).....Capt., A.U.S.

Mitchell County

Culbertson, R. A., St. Ansgar (Fort Knox, Ky.)...Lt. Col., A.U.S.
Moore, E. E., Osage (Camp Pickett, Virginia).....Major, A.U.S.
Owen, William, Osage (San Diego, Cal.).....Lt. (jg), U.S.N.R.
Walker, T. G., Riceville (Minneapolis, Minn.).....Lt., U.S.N.R.

Monona County

Almer, L. E., Moorhead (Fort Knox, Ky.).....A.U.S.
Anderson, S. N., Onawa (Corpus Christi, Tex.)....Lt., U.S.N.R.
Ganzhorn, H. L., Mapleton (Carlisle Barracks, Pa.) .....1st. Lt., A.U.S.
Gaukel, L. A., Onawa (APO 937, Seattle, Wash.)..1st Lt., A.U.S.
†Harlan, M. E., Onawa (care PM, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Stauch, M. O., Whiting (Fort Rosecrans, Cal.).....A.U.S.
Wainwright, M. T., Mapleton (APO 939, Seattle, Wash.)..A.U.S.
Wolpert, P. L., Onawa (Rochester, Minn.).....1st Lt., A.U.S.

Monroe County

Heimann, V. R., Albia (Camp Maxey, Texas).....Capt., A.U.S.
Richter, H. J., Albia (Waco, Texas).....Capt., A.U.S.
Smith, R. A., Albia (San Antonio, Texas).....1st Lt., A.U.S.

Montgomery County

Bastron, H. C., Red Oak (APO 525, New York, N. Y.) .....Major. A.U.S.
Hansen, F. A., Red Oak (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Moriarty, L. R., Villisca (APO 944, Seattle, Wash.).Capt., A.U.S.
Nelson, C. C., Red Oak (San Diego, Cal.).....Lt., U.S.N.R.
Panzer, E. J. C., Stanton (San Diego, Cal.)....Lt. (jg), U.S.N.R.
Sorensen, E. M., Red Oak (Jefferson Barracks, Mo.) .....1st. Lt., A.U.S.

Muscatine County

Ady, A. E., West Liberty (care PM, San Francisco, Cal.)U.S.N.R.
Asthalter, R. W., Muscatine (Fort Meade, Md.)..1st Lt., A.U.S.
Carlson, E. H., Muscatine (Kalamazoo, Mich.)....Capt., A.U.S.
Goad, R. R., Muscatine (Washington, D. C.) Lt. Comdr., U.S.N.R.
Kimball, J. E., Jr., West Liberty (APO Miami, Fla.)
Lindley, E. L., Muscatine (APO Los Angeles, Cal.).Capt., A.U.S.
Muhs, E. O., Muscatine (APO 4578, New York, N. Y.) .....Capt., A.U.S.
Norem, Walter, Muscatine (APO Miami, Fla.)....Capt., A.U.S.
Robertson, T. A., West Liberty (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Sywassink, G. A., Muscatine (Camp Campbell, Ky.)Major, A.U.S.
Whitmer, L. H., Wilton Junction (Fort Sill, Okla.),Major, A.U.S.

O'Brien County

Getty, E. B., Primghar (Camp Swift, Texas).....Capt., A.U.S.
Hayne, W. W., Paullina (APO New York, N. Y.)..1st Lt., A.U.S.
Moen, S. T., Hartley (APO 3492, New York, N. Y.).Major, A.U.S.
Myers, K. W., Sheldon (Watertown, S. Dak.)..1st Lt., A.U.S.

Osceola County

Kuntz, G. S., Sibley (APO 34, New York, N. Y.)

Page County

Barnes, C. A., Shenandoah (Fort Bragg, N. C.)....Capt., A.U.S.
Blackman, Nathan, Shenandoah (Ft. Leavenworth, Kan.) .....Capt., A.U.S.
Bossingham, E. N., Clarinda (APO 923, San Francisco, Cal.) .....Capt., A.U.S.
Bunch, H. Mck., Shenandoah (Farragut, Idaho) .....Lt. Comdr., U.S.N.R.
‡Burdick, F. D., Shenandoah (APO, New York, N. Y.) .....Capt., A.U.S.
Burnett, F. K., Clarinda (APO 4713, San Francisco, Cal.) .....Major, A.U.S.
Little, E. B., Shenandoah.....1st Lt., A.U.S.
Rausch, G. R., Clarinda (Wendover Field, Utah) 1st Lt., A.U.S.
Savage, L. W., Shenandoah (Fort Meade, Md.)..1st Lt., A.U.S.

Palo Alto County

Davey, W. P., Emmetsburg (San Diego, Cal.) Lt. (jg), U.S.N.R.

Plymouth County

Bowers, C. V., LeMars (APO New York, N. Y.)..1st. Lt., A.U.S.
Fisch, R. J., LeMars (Carlisle Barracks, Pa.)....1st Lt., A.U.S.
Foss, R. H., Remsen (Salt Lake City, Utah)..1st Lt., A.U.S.
Wolfson, Harold, Kingsley (Fort Lewis, Wash.)....Capt., A.U.S.

Pocahontas County

Blair, F. L., Jr., Fonda.....1st Lt., A.U.S.
Herrick, T. G., Gilmore City (Los Angeles, Cal.)...Capt., A.U.S.
Larson, J. B., Laurens (Camp Chaffee, Ark.).....Capt., A.U.S.
Leserman, L. K., Rolfe (APO 502, San Francisco, Cal.) .....Capt., A.U.S.

Polk County

Abbott, W. D., Des Moines (Oakland, Cal.)..Lt. Comdr., U.S.N.R.
Anderson, N. B., Des Moines (APO 521, New York, N. Y.) .....Lt. Col., A.U.S.
Angell, C. A., Des Moines (Camp Maxey, Texas)....Capt., A.U.S.
Anspach, R. S., Mitchellville (APO 528, New York, N. Y.) .....Lt. Col., A.U.S.
Barner, J. L., Des Moines (Atlanta, Ga.)....Major, A.U.S.
Barnes, B. C., Des Moines (Ogden, Utah).....Capt., A.U.S.
Bates, M. T., Des Moines (Fleet PO, New York, N. Y.) .....Lt. Comdr., U.S.N.R.
Bender, H. R., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Bond, T. A., Des Moines (Rochester, Minn.)....Lt. (jg), U.S.N.R.
Bone, H. C., Des Moines (Arlington, Cal.).....Capt., A.U.S.
Brown, A. W., Des Moines (Fort Leavenworth, Kan.) .....Capt., A.U.S.
Bruner, J. M., Des Moines (Fort Bliss, Texas)....Major, A.U.S.
Bruns, P. D., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
‡Burgeson, F. M., Des Moines (Am. P.O.W. 4372, Oflag, 9 A/Z, Germany.....Capt., A.U.S.
Caldwell, J. W., Des Moines (Vulcan, Alberta, Canada) .....Flight Lt., R.C.A.F.
Chambers, J. W., Des Moines (Concordia, Kan.)..1st. Lt., A.U.S.
Chase, W. B., Jr., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Clark, G. E., Jr., Des Moines (Randolph Field, Texas) .....1st Lt., A.U.S.
Connell, J. R., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Corn. H. H., Des Moines (St. Louis, Mo.).....1st Lt., A.U.S.
Coughlan, D. W., Des Moines (APO New York, N. Y.).....Capt., A.U.S.
Crowley, D. F., Jr., Des Moines (APO New York, N. Y.) .....Capt., A.U.S.
Crowley, F. A., Des Moines (APO New York, N. Y.) .....1st Lt., A.U.S.
DeCicco, Ralph, Des Moines (APO Los Angeles, Cal.) .....Capt., A.U.S.
Decker, H. G., Des Moines (Long Beach, Cal.) .....Lt. Comdr., U.S.N.R.
Downing, A. H., Des Moines (Fort Snelling, Minn.) .....1st Lt., A.U.S.
Dushkin, M. A., Des Moines (Fort Huachuca, Ariz.) .....Capt., A.U.S.
Elliott, O. A., Des Moines (Pecos, Texas).....Capt., A.U.S.
Ellis, H. G., Des Moines (Kearney, Nebr.).....Capt., A.U.S.
Ervin, L. J., Des Moines (Lubbock, Texas).....Major, A.U.S.
Fried, David, Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Fracasse, John, Des Moines.....1st Lt., A.U.S.
George, E. M., Des Moines (Norfolk, Va.).Lt. Comdr., U.S.N.R.
Gerchek, E. W., Des Moines
Gibson, D. N., Des Moines (Utica, N. Y.).....Major, A.U.S.
Goldberg, Louie, Des Moines (Gulfport, Miss.).....1st Lt., A.U.S.
Gordon, A. M., Des Moines (APO 763, New York N. Y.) .....Capt., A.U.S.
Graeber, F. O., Des Moines (Aberdeen, S. Dak.)..1st Lt., A.U.S.
Greek, L. M., Des Moines (Camp Crowder, Mo.)..1st Lt., A.U.S.
Gurau, H. H., Des Moines (Santa Ana, Cal.).....1st Lt., A.U.S.
Haines, D. J., Des Moines (APO 7115, San Francisco, Cal.) .....Capt., A.U.S.
Harris, D. D., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Harris, H. L., Des Moines.....1st Lt., A.U.S.
Hess, John, Jr., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
James, A D., Des Moines (Fleet PO, San Francisco, Cal.) .....Comdr., U.S.N.R.
Johnston, C. H., Des Moines (APO 639, New York, N. Y.) .....Lt. Col., A.U.S.
Kast, D. H., Des Molnes (Fort Stevens, Ore.).....Capt., A.U.S.
Kelley, E. J., Des Moines (Kansas City, Mo.) .....Lt. Comdr., U.S.N.R.
Kelly, D. H., Des Moines (Denver, Colo.).....Lt. Col., A.U.S.
Klocksiem, H. L., Des Moines.....Lt. (jg), U.S.N.R.
Kottke, E. E., Des Moines (Temple, Texas).....Capt., A.U.S.
Landis, S. N., Des Moines (West Palm Beach, Fla.) .....1st Lt., A.U.S.
La Tona, Salvatore, Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Lederman, James, Des Moines.....1st Lt., R.C.A.

Lehman, E. W., Des Moines (Memphis, Tenn.)....Major, A.U.S.
Lovejoy, E. P., Des Moines (Mare Island, Cal.) .....Lt. Comdr., U.S.N.R.
Maloney, P. J., Des Moines (Fort Lewis, Wash.)...1st Lt., A.U.S.
Marquis, G. S., Des Moines (Chicago, Ill.)..Lt. Comdr., U.S.N.R.
Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.
Mauritz, E. L., Des Moines (APO 763, New York, N. Y.) .....1st Lt., A.U.S.
McCoy, H. J., Des Moines (Iowa City, Iowa)...Comdr., U.S.N.R.
McDonald, D. J., Des Moines (March Field, Cal.).Capt., A.U.S.
McNamee, J. H., Des Moines (Oakland, Cal.) .....Lt. Comdr., U.S.N.R.
Mencher, E. W., Des Moines.....1st Lt., A.U.S.
Merkel, B. M., Des Moines (APO 520, New York, N. Y.) .....Major, A.U.S.
Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.) .....Capt., A.U.S.
Morden, R. P., Des Moines (APO 4570, New York, N. Y.) .....1st Lt., A.U.S.
Murphy, J. H., Des Moines (San Diego, Cal.).....Lt., U.S.N.R.
Nelson, A. L., Des Moines (Camp Livingston, La.) Capt., A.U.S.
Noun, L. J., Des Moines (Fleet PO, New York, N. Y.) .....Lt. (jg), U.S.N.R.
Noun, M. H., Des Moines (APO 871, New York, N. Y.) .....Major, A.U.S.
Nourse, M. H., Des Moines (Bethesda, Md.)..Lt. (jg), U.S.N.R.
Patton, B. W., Des Moines (Camp Robinson, Ark.).....1st Lt., A.U.S.
Pearlman, L. R., Des Moines (APO 980, Seattle, Wash.) .....Major, A.U.S.
Peisen, C. J., Des Moines (Camp Perry, Ohio)..1st Lt., A.U.S.
Penn, E. C., West Des Moines (Spokane, Wash.) .....1st Lt., A.U.S.
Pfeiffer, E. P., Des Moines (Springfield, Mo.)....Capt., A.U.S.
Phillips, A. B., Des Moines (Corpus Christi, Texas) .....Lt., U.S.N.R.
Porter, R. J., Des Moines (Kearney, Nebr.).....1st. Lt., A.U.S.
Powell, L. D., Des Moines (Long Beach, Cal.)....Capt., U.S.N.R.
Pratt, E. B., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Priestley, J. B., Des Moines (Camp Phillips, Kan.)..Major, A.U.S.
Purdy, W. O., Des Moines (Camp Howze, Texas)..Capt., A.U.S.
Riegelman, R. H., Des Moines (APO 634, New York, N. Y.) .....Major, A.U.S.
Robinson, V. C., Des Moines (Tampa, Fla.)....Capt., A.U.S.
Rotkow, M. J., Des Moines (Louisville, Ky.)....1st Lt., A.U.S.
Schaeferle, M. J., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Schlaser, V. L., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Shepherd, L. K., Des Moines (APO New York, N. Y.) .....1st Lt., A.U.S.
Shifler, H. K., Des Moines (APO New York, N. Y.).Capt., A.U.S.
Singer, P. L., Des Moines (Camp Grant, Ill.)..1st Lt., A.U.S.
Skultety, J. A., Des Moines (Brownsville, Texas) .....1st. Lt., U.S.P.H.S.
Smead, H. H., Des Moines (Nashville, Tenn.).....Capt., A.U.S.
Smith, H. J., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Smith, R. T., Des Moines (Meridian, Miss.)....1st Lt., A.U.S.
Snodgrass, R. W., Des Moines (Fort Rosecrans, Cal.) .....Capt., A.U.S.
Snyder, G. E., Grimes (Spadra, Cal.).....Major, A.U.S.
Sohm, H. A., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.
Sorensen, R. M., Des Moines (Topeka, Kan.).Major, U.S.P.H.S.
Springer, F. A., Des Moines (Treasure Island, Cal.) .....Lt. Comdr., U.S.N.R.
Stearns, A. B., Des Moines (Denver, Colo.)..Major, A.U.S.
Stickler, Robert, Des Moines (Fort Benning, Ga.) 1st. Lt., A.U.S.
Stitt, P. L., Des Moines (Seattle, Wash.)....Lt. (jg), U.S.N.R.
Throckmorton, J. F., Des Moines (Camp Howze, Texas) .....Capt. A.U.S.
Toubes, A. A., Des Moines (Leland, Miss.).....1st Lt., A.U.S.
Turner, H. V., Des Moines (Tyler, Texas).....1st Lt., A.U.S.
Updegraff, Thomas, Des Moines (Spokane, Wash.).1st Lt., A.U.S.
Van Hale, L. A., Des Moines (Transfer, Penn.)....1st Lt., A.U.S.
Vaubel, E. K., Des Moines (Portland, Ore.).....Capt., A.U.S.
Wagner, E. C., Des Moines (Washington, D. C.)..1st Lt., A.U.S.
Willett, W. M., Des Moines (Fort Bragg, N. C.)..1st Lt., A.U.S.
Wirtz, D. C., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.
Zarchy, A. C., Des Moines (Camp Cook, Cal.).....Capt., A.U.S.

Pottawattamie County

‡Beaumont, F. H., Council Bluffs (APO 34, New York, N. Y.) .....Major, A.U.S.
Cogley, J. P., Council Bluffs (Fort Ord, Cal.)....Major, A.U.S.
Collins, R. M., Council Bluffs (San Diego, Cal.)....Lt., U.S.N.R.
Dean, A. M., Council Bluffs (Pensacola, Fla.) .....Lt. Comdr., U.S.N.R.
Edwards, C. V., Council Bluffs (Olathe, Kan.) .....Lt. Comdr., U.S.N.R.
Hennessy, J. D., Council Bluffs (Chicago, Ill.)..Lt., U.S.N.R.
Jensen, A. L., Council Bluffs (APO 952, San Francisco, Cal.) .....Lt. Col., A.U.S.
Klok, G. J., Council Bluffs (Fleet PO, San Diego, Cal.) .....Lt., U.S.N.R.
Kurth, C. J., Council Bluffs (Camp Crowder, Mo.).1st Lt., A.U.S.
Limbert, E. M., Council Bluffs (Camp Crowder, Mo.) .....Capt., A.U.S.
Maiden S. D., Council Bluffs (San Francisco Cal.) .....Major. A.U.S.
Martin, L. R., Council Bluffs (Camp Rucker, Ala)..Capt., A.U.S.
Moskovitz, J M., Council Bluffs (Camp Lockett Cal.) .....Capt., A.U.S.
Sternbill, Isaac, Council Bluffs (APO 3552, Seattle, Wash.) .....Capt., A.U.S.
Tinley, R. E., Council Bluffs (APO 34, New York, N. Y.) .....Capt., A.U.S.
Treynor, J. V., Council Bluffs (Rochester, Minn.) .....Lt. Comdr., U.S.N.R.
West, A. G., Council Bluffs (Carlisle Barracks, Pa.) .....1st Lt., A.U.S.
Wieseler, R. J., Avoca (McChord Field, Wash.).....A.U.S.
Wurl, O. A., Council Bluffs (APO 871, New York, N. Y.) .....Capt., A.U.S.

Poweshiek County

Brobyn, T. E., Grinnell (Fort Ord, Cal.).....Capt., A.U.S.
Hickerson, L. C., Brooklyn (Santa Ana, Cal.)....1st. Lt., A.U.S.
Korfmacher, E. S., Grinnell (San Francisco, Cal.) .....Capt., A.U.S.
Niemann, T. V., Brooklyn (Camp Shelby, Miss.) .....1st Lt., A.U.S.
Parish, J. R., Grinnell (Treasure Island, Cal.) .....Lt. Comdr., U.S.N.R.

Ringgold County

Seaman, C. L., Mount Ayr (Van Buren, Ark.)..Capt., A.U.S.

Sac County

Bassett, G. H., Sac City (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
Deters, D. C., Schaller (APO 1001, New York, N. Y.) .....Capt., A.U.S.
Evans, W. I., Sac City (Camp Hood, Texas).....Capt., A.U.S.
Klocksiem, R. G., Odebolt (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Neu, H. N., Sac City (Portland, Ore.).....Major, A.U.S.

Scott County

Baker, R. W., Davenport (Rock Island, Ill.)..1st Lt., A.U.S.
Balzer, W. J., Davenport (APO Seattle, Wash.)..1st Lt., A.U.S.
Bishop, J. F., Davenport (APO 972, Seattle, Wash.) .....1st Lt., A.U.S.
Block, L. A., Davenport (APO 534, New York, N. Y.) .....Major, A.U.S.
Boden, W. C., Davenport (APO 3760, New York, N. Y.) .....Capt., A.U.S.
Boyer, U. S., Davenport (Rock Island, Ill.).....Lt. Col., A.U.S.
Brown, D. H., Davenport (Waycross, Ga.).....Capt., A.U.S.
Brown, M. J., Davenport (Camp Hale, Colo.)....Major, A.U.S.
Carey, E. T., Davenport (Fort Andrews, Mass.)..1st Lt., A.U.S.
Christiansen, C. C., Dixon (APO 961, San Francisco, Cal.) .....Capt., A.U.S.
Cummins, G. M., Jr., Davenport.....1st Lt., A.U.S.
Decker, C. E., Davenport (Oklahoma City, Okla.) .....1st Lt., A.U.S.
Evans, H. J., Davenport (Colorado Springs, Colo.).Capt., A.U.S.
Gibson, P. E., Davenport (Palm Springs, Cal.).....Capt., A.U.S.
Hurevitz, H. M., Davenport (APO 3658, New York, N. Y.) .....Capt., A.U.S.
Hurteau, Everett, Davenport (APO 534, New York, N. Y.) .....Capt., A.U.S.
Hurteau, W. W., Davenport (Camp Barkeley, Texas) .....Major, A.U.S.
Kimberly, L. W., Davenport (New Orleans, La.).Capt., A.U.S.
Krakauer, Max, Davenport (Fort Hayes, Ohio)....1st Lt., A.U.S.
LaDage, L. H., Davenport (Camp Campbell, Ky.)..Capt., A.U.S.
Lorfeld, G. W., Davenport (Waynesburg, Pa.).....Capt., A.U.S.
Marker, J. I., Davenport (Camp Carson, Colo.)..Col., A.U.S.
McMeans, T. W., Davenport (APO New York, N. Y.) .....1st Lt., A.U.S.
Neufeld, R. J., Davenport (Rock Island, Ill.).....Capt., A.U.S.
Sheeler, I. H., Davenport (Omaha, Neb.).....1st Lt., A.U.S.
Smazal, S. F., Davenport (Pando, Colo.).....1st Lt., A.U.S.
Sorenson, A. C., Davenport (Oakland, Cal.)..Lt. Comdr., U.S.N.R.
Sunderbruch, J. H., Davenport (Paris, Texas)....1st Lt., A.U.S.
Weinberg, H. B., Davenport (Fort Benning, Ga.)..Major, A.U.S.
Zukerman, C. M., Bettendorf (Cincinnati, Ohio)....Capt., A.U.S.

Shelby County

Bisgard, C. V., Harlan (Farragut Air Base, Idaho) .....Lt. Comdr., U.S.N.R.
Griffith, W. O., Shelby (Camp Davis, N. C.).....A.U.S.
McGowan, J. P., Harlan (San Diego, Cal.)..Lt. Comdr., U.S.N.R.

Sioux County

Gleysteen, R. R., Alton (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.
Grossmann, E. B., Orange City (Fort Sam Houston, Texas) .....1st Lt., A.U.S.
Larsen, M. O., Hawarden (Camp Bowie, Texas)..Major, A.U.S.
Oelrich, A. M., Hull (Biloxi, Miss.).....1st Lt., A.U.S.
Oelrich, C. D., Sioux Center (Biloxi, Miss.).....1st Lt. A.U.S.

Story County

Conner, J. D., Nevada (APO San Francisco, Cal.).1st Lt., A.U.S.
Fellows, J. G., Ames (Ft. Leonard Wood, Mo.).....Capt., A.U.S.
Lekwa, A. H., Story City (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
McFarland, G. E., Jr., Ames (San Pedro, Cal.)....Lt., U.S.N.R.
McFarland, J. E., Ames (Farragut, Idaho)..Lt. Comdr., U.S.N.R.
Rosebrook, L. E., Ames (San Antonio, Texas).....1st Lt., A.U.S.
Sperow, W. B., Nevada (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
Thorburn, O. L., Ames (Santa Ana, Cal.).....Major, A.U.S.

Tama County

Bezman, H. S., Traer (Camp Hood, Tex.).....1st. Lt., A.U.S.
Boller, G. C., Traer (Camp Bowie, Texas)
Dobias, S. G., Chelsea (APO 937, Seattle, Washington)
Havlik, A. J., Tama (Fleet PO, San Francisco, Cal.).Lt., U.S.N.R.
Schaeferle, L. G., Gladbrook (Fort Leonard Wood, Mo.)
Standefer, J. M., Tama (San Diego, Cal.)

Taylor County

Hardin, J. F., Bedford (APO 952, San Francisco, Cal.) .....1st Lt., A.U.S.

Union County

Paragus, M. R., Creston (Tampa, Fla.).....Capt., A.U.S.
Ryan, C. J., Creston (Scribner, Neb.).....1st Lt., A.U.S.

Wapello County

Brentan, Emanuel, Ottumwa (APO 252, New York, N. Y.) .....1st Lt., A.U.S
Brody, Sidney, Ottumwa (APO New York, N. Y.)..Major, A.U.S
Gilfillan, C. D. N., Eldon (Battle Creek, Mich.).....Capt., A.U.S.
Hughes, R. O., Ottumwa (Coronado, Cal.)..Lt. Comdr., U.S.N.R.
Moore, G. C., Ottumwa (Carlisle Barracks, Pa.)....1st Lt., A.U.S.
Nelson, F. L., Jr., Ottumwa (APO 4774, New York, N. Y.) .....Capt., A.U.S.
Prewitt, L. H., Ottumwa (March Field, Cal.).....Major, A.U.S.
Selman, R. J., Ottumwa (El Paso, Texas).....Lt. Col., A.U.S.
Struble, G. C., Ottumwa (Fort Harrison, Ind.)....Lt. Col., A.U.S.
Whitehouse, W. N., Ottumwa (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Worley, C. L., Ottumwa (Camp Young, Cal.).....Capt., A.U.S.

Warren County

Fullgrabe E. A., Indianola (Bethesda, Md.) Lt. (jg), U.S.N.R.
Hoffman, G. R., Lacona (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.
Shaw, E. E., Indianola (APO 827, New Orleans, La.) .....Capt., A.U.S.
Trueblood, C. A., Indianola (Camp Campbell, Ky.)..Capt., A.U.S.

Washington County

Boice, C. L., Washington (Atlantic City, N. J.).....Lt., U.S.N.
Droz, A. K., Washington (Grosse Ile, Mich.).Lt. Comdr., U.S.N.R.
Mast, T. M., Washington (Portland, Ore.).....Lt. U.S.N.R.
Stutsman, R. E., Washington (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Ware, S. C., Kalona (A. P. Hill Mil. Res., Va.).....Capt., A.U.S.

Wayne County

Hyatt, C. N., Jr., Humeston (Indio, Cal.).....Capt., A.U.S.

Webster County

Baker, C. J., Fort Dodge (APO New York, N. Y.)...Capt., A.U.S.
Burch, E. S., Dayton (APO 4754, San Francisco, Cal.) .....Capt., A.U.S.
Burleson, M. W., Fort Dodge (Brigham City, Utah) .....1st Lt., A.U.S.
Coughlan, C. H., Fort Dodge (Jefferson Barracks, Mo.) .....Major, A.U.S.
Dawson, E. B., Fort Dodge (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Glesne, O. N., Ft. Dodge (Great Lakes, Ill.)..Lt. Comdr., U.S.N.R.
Joyner, N. M., Fort Dodge (Brooklyn Field, Ala.)
Kluever, H. C., Fort Dodge (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Larsen, H. T., Fort Dodge (Baltimore, Md.)...Lt. (jg), U.S.N.R.
Shrader, J. C., Fort Dodge (APO 181, Los Angeles, Cal.) .....Major, A.U.S.
Thatcher, O. D., Fort Dodge (APO 634, New York, N. Y.) .....Capt., A.U.S.
Thatcher, W. C., Fort Dodge (APO 464, New York, N. Y.) .....Capt., A.U.S.
Van Patten, E. M., Ft. Dodge (Alamogordo, N. M.).1st Lt., A.U.S.

Winneshiek County

Fritchen, A. F., Decorah (APO San Francisco, Cal.) .....Comdr., U.S.N.R.
Hospodarsky, L. J., Ridgeway (Seattle, Wash.)..Capt., A.U.S.
Larson, L. E., Decorah (Farragut, Idaho).....Lt., U.S.N.R.
Svendsen, R. N., Decorah (San Diego, Calif.)..Lt. (jg) U.S.N.R.
Van Besien, G. J., Decorah (APO New York, N. Y.).....1st Lt., A.U.S.

Woodbury County

Bettler, P. L., Sioux City (APO San Francisco, Cal.) .....Major, A.U.S.
Blackstone, M. A., Sioux City (Pittsburg, Cal.).1st Lt., A.U.S.
Boe, Henry, Sioux City (Salina, Kan.).....Capt., A.U.S.
Burroughs, H. H., Sioux City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
‡Cmeyla, P. M., Sioux City (APO San Francisco, Cal.) .....Capt., A.U.S.
Cowan, J. A., Sioux City (Oklahoma City, Okla.) .....Major, U.S.P.H.S.
Crowder, R. E., Sioux City (San Diego, Cal.).Lt. Comdr., U.S.N.R.
Dimsdale, L. J., Sioux City (Clinton, Iowa).....1st Lt., A.U.S.
Down, H. I., Sioux City (Camp Breckenridge, Ky.) Major, A.U.S.
Elson, V. J., Danbury (Camp Walters, Tex.).....Capt., A.U.S.
Frank, L. J., Sioux City (Mare Island, Cal.).Lt. Comdr., U.S.N.R.
Graham, J. W., Sioux City (San Diego, Cal.).Lt. Comdr., U.S.N.R.
Grossman, M.D., Sioux City (APO 33, San Francisco, Cal.) .....Capt., A.U.S.
Heffernan, C. E., Sioux City (Salt Lake City, Utah) .....1st Lt., A.U.S.
Hicks, W. K., Sioux City (Spokane, Wash.).....Major, A.U.S.
Honke, E. M., Sioux City (Palm Springs, Cal.)..Capt., A.U.S.
Kaplan, David, Sioux City (Fort Bragg, N. C.)..1st Lt., A.U.S.
Knott, R. C., Sioux City (Atlanta, Ga.).....Capt., A.U.S.
Krigsten, W. M., Sioux City (Springfield, Mo.)..Lt. Col., A.U.S.
Lande, J. N., Sioux City (El Paso, Texas).....Major, A.U.S.
Martin, R. F., Sioux City (Gallatin, Tenn.).....1st. Lt., A.U.S.
Mattice, L. H., Danbury (APO 4580, San Francisco, Cal.) .....1st Lt., A.U.S.
McCuistion, H. M., Sioux City (APO New York, N. Y.) .....Capt., A.U.S.
Mugan, R. C., Sioux City (Gowen Field, Idaho)..1st Lt., A.U.S.
Osincup, P. W., Sioux City (Edgewood Arsenal, Md.) .....1st Lt., A.U.S.
Rarick, I. H., Sioux City (APO 980, Seattle, Wash.)..Capt., A.U.S.
Reeder, J. E., Jr., Sioux City (Modesto, Cal.)....Capt., A.U.S.
Ryan, M. J., Sioux City (Topeka, Kan.).....Capt., A.U.S.
Schwartz, J. W., Sioux City (Ft. Leavenworth, Kan.) .....Lt. Col., A.U.S.
Tracy, J. S., Sioux City (Ephrata, Wash.).....Capt., A.U.S.
Wilson, L. L., Sioux City (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.

Worth County

Westly, G. S., Manly (APO 4580, San Francisco, Cal.) .....Major, A.U.S.

Wright County

Aageson, C. A., Dows
Bird, R. G., Clarion (Sacramento, Cal.).....Lt. Comdr., U.S.N.R.
Doles, E. A., Clarion (Phoenix, Ariz.)
Leinbach, S. P., Belmond (Farragut Air Base, Idaho)
Missildine, W. H., Eagle Grove (APO 25, San Francisco, Cal.) ..... Capt., A.U.S.

(*) Reported missing in action
(†) Reported killed in action.
(‡) Reported prisoner of war.

FIFTY-FIRST ANNUAL CONVENTION OF THE ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES

Representatives from fourteen foreign countries will attend the fifty-first annual convention of the Association of Military Surgeons of the United States to be held in Philadelphia in the Bellevue-Stratford Hotel October 21, 22 and 23. The convention, the most important medical meeting ever held in this country in wartime, will be attended by 2,000 doctors now attached to the armed forces here and abroad, as well as by the thousands of other physicians and medical men in civilian practice. A symposium on war medicine, which will chart the progress and the recent advances made in the care and hospitalization of men in the armed forces, will highlight the three-day meeting.

Lieutenant-General Sir Alexander Hood, director general of the British Army Medical Services, will head the list of visiting medical men from outside the United States. With Lieutenant-General Hood in the British delegation will be Major-General C. Max Page, and Colonel Frank S. Gillespie, of the Royal Army Medical Corps, at present liaison officer at the Medical Field Service School, Carlisle Barracks, Pennsylvania.

Canada will be represented by Brigadier G. B. Chisholm, director general of medical services of the Royal Canadian Army; Surgeon Captain A. McCallum, director general of medical services for the Royal Canadian Navy; Wing Commander H. A. Peacock, principal medical officer of the First Training Command; Wing Commander L. M. Emard, principal medical officer of the Third Training Command, and Lieutenant-Colonel T. A. Lebbetter, of the Royal Canadian Army.

Squadron Leader R. V. Pridmore, medical liaison

(Continued on page 493)

SPEAKERS BUREAU ACTIVITIES

PRESIDENT'S MEETINGS

The Speakers Bureau is happy to announce that in cooperation with the president of the Iowa State Medical Society, Dr. Lee R. Woodward of Mason City, a series of president's meetings will be presented in various sections of the state during the first two weeks in November. In spite of the fact that every doctor is working harder than ever before, or perhaps because of it, the need for a scientific and social meeting within easy traveling distance of most of the doctors becomes more important than ever before. Economic and legislative problems confronting the medical profession have increased rather than lessened, and it is imperative that all physicians become familiar with the proposed legislation and discuss it with their colleagues.

Dr. Woodward believes that every physician will welcome the opportunity to leave his practice for one evening and attend a meeting at which he will hear discussions of the medical problems with which he is being confronted. It is the president's belief that the doctor will appreciate the hour of relaxation which is contemplated following the program. Tentative plans have been made for meetings in West Union, Algona, Sheldon, Denison, Boone, Tama, Monticello, Fairfield, Osceola, and Red Oak. Almost every doctor in Iowa is within fifty miles of one of these centers, and can, therefore, attend a meeting without too much sacrifice of time or energy.

Preliminary plans call for starting the meetings at five o'clock with a discussion of the Wagner-Murray bill and other economic matters, followed by dinner at six. At seven the scientific papers will be presented, which will pertain to the most recent developments of sulfonamide and vitamin therapy. At eight the formal meeting will be dismissed, but it is hoped that the doctors will remain for an hour of informal conversation and relaxation.

Definite information about the dates and places of the meetings will be given in the November issue of the JOURNAL, and during the latter part of October letters of invitation will be sent to all members of the Society.

SCIENTIFIC FILMS

The Bureau would be pleased to arrange a series of scientific films for any medical groups desiring such a program. Discussions and case reports by the various physicians of such organizations could be supplemented by a pertinent scientific film. A new list of available medical motion pictures has been compiled and will be mailed to any physician upon request.

Marshall County Medical Society

The Marshall County Medical Society is opening its fall season with a meeting Tuesday evening, October 5. The program will consist of a film, entitled Immunization Against Infectious Diseases by Charles F. McKhann, M.D., and Harry A. Towsley, M.D., of the University of Michigan Hospital at Ann Arbor. All physicians in the vicinity of Marshalltown are most cordially invited to meet with the Marshall County doctors at the Hotel Tallcorn at six-thirty o'clock.

Wapello County Medical Society

A series of scientific films has been arranged for the fall and winter season of the Wapello County Medical Society. The program was opened Tuesday evening, September 21, with the film, Immunization Against Infectious Diseases, which was prepared by Charles F. McKhann, M.D., and Harry A. Towsley, M.D., of Ann Arbor, Michigan. Following is the schedule for the remainder of the meetings:

November 2	Cardiac Irregularities Carl J. Wiggers, M.D., Cleveland
December 21	Acute Appendicitis Edward Martin, M.D., Philadelphia*
February 15	Varicose Veins; Their Treatment by the Modern Combined Ligation and Injection Treatment Herman O. McPheeters, M.D., Minneapolis
April 18	Carcinoma of the Larynx, Tracheotomy and Thyrotomy Gordon B. New, M. D., Rochester, Minnesota

*Deceased.

RADIO SCHEDULE

WOI—Wednesdays at 2:05 p. m.
WSUI—Thursdays at 9:00 a. m.

October 6- 7	The Common Cold Lloyd G. Howard, M.D.
October 13-14	Dangers in the Indiscriminate Use of Drugs Don C. Koser, M.D.
October 20-21	Mumps Carl A. Samuelson, M.D.
October 27-28	The Care of Some of the Commoner Skin Diseases Irma Aleshire, M.D.

WOMAN'S AUXILIARY NEWS

Mrs. Keith M. Chapler, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—Mrs. W. S. Reiley, Red Oak
President-Elect—Mrs. J. C. Decker, Sioux City
Secretary—Mrs. A. G. Felter, Van Meter
Treasurer—Mrs. A. E. Merkel, Des Moines

A MESSAGE FROM THE PRESIDENT

Now that playtime is practically over and work begins, we should seriously consider our duties for the coming fall and winter. We must rouse ourselves from our summer lethargy and jog our brains for new ideas concerning the work of the Auxiliary.

As the members know, each year we strive for a 100 per cent membership, and to me it seems that this year it should not be too hard to reach that goal. A great number of the doctors are in service and each of these wives should feel the added responsibility of helping to take her husband's place in the community. I realize, of course, that we cannot take over their duties, but by our actions and attitude we can help or hinder, as we desire, their positions when they return. If one chooses, one can give to the community the impression of being sincerely interested in the people, their work, and their life; or, one can easily leave the impression of being in the community for material gain alone. So often, especially in the rural towns, people are apt to stand a little in awe of their family physician and to place him in their minds as the highest type of manhood. Why not exert a little effort to keep this feeling? We have everything to gain and nothing to lose.

Of course, it is not necessary to ask that we take part in community war work; that is to be taken for granted. I ask that all Auxiliary members give their full support, loyalty and cooperation to aid the war effort during the coming year whenever and wherever possible. Make an effort to get acquainted with all doctors' wives and urge them to become members of the Auxiliary. It may be that many a young doctor's wife has been left in a strange community after her husband has gone into service; make her feel as one of us. Young blood is a help to any organization and we older members should not take a condescending attitude toward the younger ones since, as we know, they will carry on our work later, and there must be unity and good-feeling between the two age groups.

I think that in this year of blackouts and practice raids a suitable theme for our order would be "Alert." We must be alert at all times to hear the needs of the community and as an Auxiliary we can best serve these needs. Be alert to the changes taking place in our lives and adjust our work and feelings to these changes. Be alert to new ideas which might help our work and be quick to accept them. Be on the alert to sense the changing moods and emotions of our husbands if they are called to the service and make our emotions secondary to theirs, because, after all, our jobs at home are far easier than theirs. Make them proud of the wives they have left and show them that we are doctors' wives in deed as well as in name. Let us have a blackout of our own by blacking out the unpleasant things which are bound to crop out and harass us, by blacking out personal feelings and grudges, and by making an all-out effort to help in the Auxiliary work.

Every doctor's wife should look into the new service branch being offered by our government; that is, the Cadet Nurse Corps wherein young girls can learn nursing. It is obvious that every graduate nurse relieves our doctors in their work, and certainly we should, as doctors' wives, do all we can to encourage young girls to take advantage of this program.

Mrs. W. S. Reiley, President

COMMITTEES OF THE WOMAN'S AUXILIARY 1943-1944

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Mrs. Frank D. McCarthy.....Sioux City
Mrs. Helge Borre.....Emerson

HISTORIAN
Mrs. William A. Seidler.....Jamaica

PARLIAMENTARIAN
Mrs. Isaac Sternhill.....Council Bluffs

THE UNITED STATES CADET NURSE CORPS

The United States Cadet Nurse Corps, organized under the provision of the Bolton Act, is seeking 65,000 new student nurses this year for both military and civilian needs.

An intensive national recruitment campaign for these student nurses is under way. As doctors' wives let us help 100 per cent in this campaign. Our work is needed!

WHAT TO TELL APPLICANTS*

1. Applicants may wish information about more than one school of nursing before making a decision. Application to the United States Cadet Corps is made at the school, not through a national office.
2. Members of the Corps will attend schools of nursing that receive an allotment of Federal funds under the Bolton Act.
3. Graduation under the United States Cadet Nurse plan makes graduate nurses eligible for registration by State Boards of Nurse Examiners. They are then R. N.'s.
4. The pledge of the United States Cadet Nurse is to remain in the type of essential nursing service of her choice, for the duration of the war, either civilian or military. They are not required to pledge themselves to military service only.
5. Nurses will not be drafted unless a national service act is passed affecting all women. Student nurses will not be more vulnerable to such action merely because they are members of the Cadet Nurse Corps.
6. Members of the Corps must be:
   a. Seventeen to thirty-five years old (age and academic requirements vary slightly with different schools of nursing).
   b. In good health.
   c. A graduate of an accredited high school.
7. Corps members receive without cost to themselves:
   a. Full training which meets the requirements for graduation of an accredited nursing school. Complete tuition and fees are paid.
   b. Official cadet uniforms for optional outdoor wear, summer and winter.
   c. School uniforms, room, and board.
   d. Regular monthly allowances of $15.00 during the first nine months, $20.00 the next fifteen to twenty-one months and at least $30.00 a month for the remaining months until graduation.

Mrs. Russell C. Doolittle, Chairman Public Relations

*Taken from the American Hospital Association Report.

PROGRESS IN CANCER CONTROL*

Progress in cancer control in the last twenty-five years while not dramatic has been steady and based upon scientific principles. The main lines of progress have been as follows:

1. The continued development of irradiation as a method of treatment and clarification of its advantages and limitations.
2. The constant improvement in surgical technic and the standardization of the surgical treatment of some forms of cancer.
3. The discovery of numerous carcinogenic substances and the proof of their importance in certain types of human cancer.
4. The discovery of the relationship between hormones and some cancers.
5. The general recognition by the medical profession that cancer is at first a localized process and then is curable.
6. The institution of the lay cancer educational program designed to educate the individual in the necessity of seeking medical advice while the cancer is localized.
7. The establishment of departments concerned with the control of cancer by the National and many State governments.
8. The more generous financial support of cancer research.
9. The organization of approved cancer clinics by the American College of Surgeons and by some state health departments.
10. The incorporation of the study of cancer as a part of courses in biology in many high schools and colleges.

*From the July, 1943, Bulletin, Women's Field Army, Iowa Division.

SPEAKERS BUREAU RADIO SCHEDULE

WOI—Wednesdays at 2:05 p. m.
WSUI—Thursdays at 9:00 a. m.

October	6- 7	The Common Cold Lloyd G. Howard, M.D.
October	13-14	Dangers in the Indiscriminate Use of Drugs Don C. Koser, M.D.
October	20-21	Mumps Carl A. Samuelson, M.D.
October	27-28	The Care of Some of the Commoner Skin Diseases Irma Aleshire, M.D.

SOCIETY PROCEEDINGS

Boone County

Members of the Boone County Medical Society met at the home of Dr. Wallace H. Longworth in Boone Tuesday evening, August 31, in honor of Dr. Francis E. Powers who is leaving Boone to practice in Oak Park, Illinois. Members of the Story County Medical Society were also present for the occasion. Following dinner, Dr. Albert B. Deering, on behalf of the Boone County Medical Society, presented Dr. Powers with a pen and pencil set as a token of fellowship and their regard for him.

Butler County

The Butler County Medical Society met in Allison Tuesday evening, September 21. The scientific program, which was held immediately following dinner, consisted of papers by Edwin M. Mark, M.D., Clarksville, Henry N. Bruechert, M.D., Parkersburg, and Frank F. McKean, Allison.

Emmet County

A meeting of the doctors and nurses in Emmet County was held in Estherville Wednesday evening, September 1. The program for the evening consisted of motion picture films on sulfa therapy and pneumonia, blood plasma, and the donation of blood for use by the Red Cross for the armed forces.

Hamilton County

The Hamilton County Medical Society met at a noon luncheon Tuesday, August 31. The guest speaker was Forrest J. Austin, M.D., of Fort Dodge, who discussed the Federal Government's emergency maternity and infant care program.

Hardin County

Members of the Hardin County Medical Society met Friday evening, September 24, in the Pearl Schwarck Tea Room in Eldora. Following dinner at 6:30 p. m., Harold Margulies, M.D., Des Moines, spoke before the group on Hypertension in Relation to a Diabetic Patient.

W. E. Marsh, M.D., Secretary

Keokuk County

The Keokuk County Medical Society held its regular monthly meeting in Sigourney Thursday evening, September 23. The scientific program consisted of recorded lectures on The Diagnosis of Poliomyelitis, by John A. Toomey, M.D., of Cleveland, Ohio, and Office Gynecology, by Joseph L. Baer, M.D., of Chicago, Illinois.

Marion County

The regular meeting of the Marion County Medical Society was held Tuesday, September 23, at 6:30 p. m. in the Legion Hall in Pella. The guest speaker for the evening was Martin J. Reimringer, M.D., Des Moines, who spoke on The Toxemias of Pregnancy. A motion picture film on The Prevention and Treatment of Eclampsia, prepared by Joseph B. DeLee, M.D., was also presented by Dr. Reimringer. Case reports were presented by Francis M. Roberts, M.D., of Knoxville.

D. S. Burbank, M.D., Secretary

Montgomery County

The Montgomery County Medical Society met with the Murphy Memorial Hospital staff in Red Oak Thursday, August 19. Due to the fact that all of the officers elected at the first of the year had been called into the armed services, the following officers were elected to serve the society during the remainder of the year: Dr. Gladys A. Cooper of Red Oak, president; Dr. Oscar Alden of Red Oak, vice president; and Dr. Velura E. Powell of Red Oak, secretary and treasurer. The previous officers were, respectively: Dr. Carrol C. Nelson, Dr. Fred A. Hansen, both of Red Oak, and Dr. Edward J. C. Panzer of Stanton. The group also voted to approve the tuberculosis program planned for the county.

Polk County

The regular meeting of the Polk County Medical Society was held in conjunction with the Broadlawns Visiting Staff Meeting Wednesday evening, September 15, at Broadlawns Hospital in Des Moines. Dinner was served at 6:00 p. m., following which a paper on Mediastinal Tumors was presented by Frank W. Fordyce, M.D. The presentation was discussed by Drs. Noble W. Irving, John Russell and Julius S. Weingart. At 7:30 p. m. the guest speaker of the evening, Orlen J. Johnson, M.D., of the Council on Industrial Health of the American Medical Association, spoke on Medical-Industrial Relationships.

Scott County

The Scott County Medical Society held its opening meeting of the fall season Tuesday, September 7, at 6:00 p. m., at the Lend-A-Hand Club in Davenport. The scientific program consisted of a discussion on Common Neurologic Disorders by Adolph L. Sahs, M.D., Iowa City.

Leo J. Miltner, M.D., Secretary

Woodbury County

The Woodbury County Medical Society held its annual golf and stag party at the Sioux City Country Club Tuesday, September 14. Golf started at one o'clock in the afternoon and dinner was served at seven-thirty.

R. T. Rohwer, M.D., Secretary

PERSONAL MENTION

Dr. **Francis E. Powers** of Boone is locating in Oak Park, Illinois, after fourteen years of practice in Boone. In Oak Park Dr. Powers will be associated with Dr. Howard C. Riordan.

Dr. **M. C. Hennessy** of Council Bluffs spoke before the Clarinda Kiwanis Club at its meeting Tuesday evening, September 7, in the Linderman Hotel in Clarinda. Dr. Hennessy discussed the Wagner-Murray Bill.

Dr. **George Mattison**, who has been located in Akron since 1914, plans to move to California within a few weeks. He will become associated with Dr. Albert J. Meyer of Glendale, who formerly practiced in Hawarden.

Dr. **Chester L. Putnam** of the State Department of Health in Des Moines spoke before the Black Hawk County Nursing Service at its annual meeting Saturday, September 18, at 1:00 p. m. in Black's Tea Room in Waterloo. The subject of Dr. Putnam's talk was Death Begins at Forty. Miss Evelyn Hollen, nutritionist of the State Department of Health in Des Moines, also addressed the group. She presented an illustrated lecture entitled, Do You Eat to Meet Body Needs? Two short movies were shown, Proof of the Pudding and Lunch for Johnny.

Dr. **Thomas McMahon**, who has been practicing in Lawler for the past five years, has located in Wyoming in the offices formerly occupied by the late Dr. Joseph A. Hoegen.

Dr. **Jay R. Dewey** of Schaller addressed the Rotary Club of that city Thursday evening, September 2. Dr. Dewey discussed recent discoveries in drugs which have been of immense value to medical science.

MARRIAGE

Mrs. Carroll Browning Martin and Dr. Clement A. Sones of Des Moines were married Friday morning, September 10, at the First Methodist Church in Des Moines. Following a short wedding trip, the couple will reside in Des Moines where Dr. Sones has been engaged in the practice of medicine for the past several years.

DEATH NOTICES

Anderson, George William, of Early, aged seventy-one, died September 2 following a brief illness. He was graduated in 1901 from the State University of Iowa College of Homeopathic Medicine, and at the time of his death had long been a member of the Sac County Medical Society.

Courshon, Benjamin, of Sioux City, aged seventy-five, died September 13 after an extended illness. He was graduated in 1901 from the Atlanta College of Physicians and Surgeons, and at the time of his death was a member of the Woodbury County Medical Society.

Stevens, Franklin Augustus, of Belmond, aged seventy-nine, died September 17 following a severe illness of several weeks. He was graduated in 1890 from the University of Buffalo School of Medicine, and at the time of his death was a life member of the Wright County and Iowa State Medical Societies.

Whiteis, William Robert, of Iowa City, aged seventy-four, died September 3 of coronary heart disease. He was graduated in 1895 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Johnson County Medical Society.

OMAHA MID-WEST CLINICAL SOCIETY

The eleventh annual assembly of the Omaha Mid-West Clinical Society will be held in Omaha October 25 to 29, 1943, with headquarters in Hotel Paxton. It is believed that the program this year will compare favorably with those of the past, the guest speakers including such well-known physicians as Dr. Cyrus E. Burford, St. Louis; Dr. Eben J. Carey, Milwaukee; Dr. Sanford R. Gifford, Chicago; Dr. L. Emmett Holt, Jr., Baltimore; Dr. Sara M. Jordan, Boston; Dr. Jennings C. Litzenberg, Minneapolis; Dr. Raymond W. McNealy, Chicago; Dr. Frank R. Ober, Boston; Dr. Robert L. Sanders, Memphis; Dr. Tom D. Spies, Birmingham; and Dr. Harold G. Wolff, New York City.

Symposia on Pneumonia, Shock, and Peripheral Vascular Diseases will be held Wednesday, October 27, and on Friday, October 29, personnel of the United States Navy Medical Corps will present a symposium on War Medicine and Surgery. The five day assembly might be described as an intensive refresher course, each day from nine in the morning until ten in the evening being taken up with lectures, clinics, and symposia. Roundtable discussions on live topics will follow all luncheons and dinners. Plans for scientific, moving picture, and technical exhibits are complete.

All medical officers of the United States Army, Navy, and Public Health Service will be admitted without the payment of the usual five dollar registration fee.

History of Medicine in Iowa

Edited by the Historical Committee

Dr. Walter L. Bierring, Des Moines, Chairman
Dr. Henry G. Langworthy, Dubuque, *Secretary*
Dr. John T. McClintock, Iowa City
Dr. Murdoch Bannister, Ottumwa
Dr. Frank E. Sampson, Creston

Medical History of Woodbury County

William Jepson, M.D., Sioux City

Part III

(Continued from last month)

Having briefly portrayed the laboratory facilities in New York City during that period, it may not be out of place to show that our State University, Medical Department, was not backward in providing facilities for laboratory work. Thus in 1883, and for several years before, it had in its new medical building a well constructed and lighted laboratory, capable of accommodating about fifty students. It was supplied with twenty-four microscopes mounted with 3/4 and 1/5 objectives and a 2-1/12 oil immersion lens, microtomes, staining materials, and other essential equipment for excellent work for those times. It is true that the student's time was largely employed in the study of normal minute anatomy, since pathologic material was scarce. The significance of bacterial demonstrations was not clearly understood.

Surgery was equally limited in its scope, since the rôle played by bacterial infection of wounds was not known or, if so, very imperfectly. To the profession of the present day, with a clear knowledge of the part that pathogenic germs play in the various specific diseases and wound infections, it must seem incredible that there existed within comparatively recent times such a lack of fundamental knowledge. It is true, however, that there are men yet practicing, who graduated from some of the best medical schools some fifty to sixty years ago, who never witnessed any attempts being made at anti- or aseptic procedures in the course of three years of college training or in hospital interning of that period.

To such graduates of that period who are living and were interested and participated in the struggle for a recognition of the rôle which bacteria would play in the pathogenicity of diseases or infections, it is interesting to recall how bitter a struggle it was, first between the French botanist, Pasteur, and the German chemist, Liebig. The latter contended and the former denied that life could develop de novo.

With the ascendency of Pasteur's views and the incontrovertible demonstration by him of certain diseases being due to specific micro-organisms, the thought that germs found abundantly in infected suppurating wounds, and not in fresh wounds, must have led some, among them Lister, to suspect that they were a factor in the difficulties experienced in wound management. Learning that carbolic acid was lethal to such germs in vitro, he was led to attempt to destroy them in and about an operative field by the carbolic acid spray and obtained improved results.

Lawson Tait, the outstanding ovariotomist of England and the world at that time, seriously questioned Lister's results and defied him to show better results than he had without the use of any such procedures.

Tait in preparing for an ovariotomy would take the necessary sponges from a bag hanging upon the wall in the operating room and place them in a basin of hot water (which, of course, would partially sterilize them, although he did not recognize it) and then proceed with the operation; namely, opening the abdomen in the course of the linea alba. Since at that time such tumors were removed only when they were rather large, the surface would at once present, and with a trocar or knife the loculi were opened and the contents permitted to escape. The tumor, when sufficiently emptied, was pulled out of the abdomen by forceps and its pedicle ligated and dropped back, and the abdominal wound closed by through and through sutures.

What was the basis for the great degree of

success which followed in the hands of surgeons doing that class of work? This state at that time had two outstanding and successful ovariotomists, Professor Hughes of Keokuk and Professor Peck of Davenport, and neither paid any attention to anti- or aseptic surgery. It was due to the fact that infected hands and sponges were not introduced into the abdominal cavity unless there existed adhesions. The result was, except in the latter instance, that but few germs entered the abdominal cavity other than those found in the ligatures and sutures employed, and they in number and virulence were so limited that destruction could be accomplished through the bacteriolytic and bacteriocidal action of the peritoneal fluid and phagocytosis. The absence of intra-abdominal blood clots, since there was no intra-abdominal bleeding except in the instance of adhesions, and the lavage of the wound by the escaping tumor fluid were further factors promoting a favorable outcome.

This was a fierce struggle between the highly satisfactory results of non-aseptic methods on the one hand and the antiseptic and later aseptic surgery on the other, with the outcome for a time seeming doubtful; but since the truth must ultimately prevail, aseptic surgery was born and with it the development of surgery, which has gradually grown to its present state of efficiency.

In 1886 the first successful ovariotomy was performed in Sioux City by Dr. Christian Fenger, of Chicago, upon a patient of Dr. Knott.

In 1887 an operative procedure took place in the city, which, while simple in itself, was destined to be the forerunner of more important surgical events. The case, briefly stated, was that of a man sixty-four years of age, who was suffering from a strangulated hernia and who had been seen by a somewhat recent arrival in the city. Finding himself unable to reduce the hernia, he requested that a consultant be called. The choice fell to Dr. J. M. Knott, who upon arrival sought reduction by taxis. Having failed after an effort extending over four or five minutes, the doctor was timidly asked by the attendant if there might not be some danger, through persistence, in damaging the bowel so that little hope might be entertained of a favorable result if an operation became necessary. The doctor replied by saying, "Operate! What did you think, operating?" To which the attendant replied, "What else can be done, except to have the man die. I think we should put forth an effort to save him." This was assented to and the attendant secured the necessary instruments, rolled them in a towel and boiled them in a cleaned wash basin. Carbolic acid was later added to the water to make a solution for the sponges. The patient in question lived in the second story of a house. His quarters consisted of two rooms, one used as a kitchen and dining room and the other as a sitting room and bedroom. It had an old-fashioned couch with a head and back rest upon which the patient was placed. The field of operation, after being shaved, was thoroughly washed with soap, ether and the carbolic acid solution, 5 per cent. The instruments were placed on a chair by unfolding the towel, and the chair also held the basin with sponges. Dr. Knott was asked to operate; the attendant told him he had never operated on a hernia. Dr. Knott refused, stating that he would give the anesthetic. Therefore the attendant, after thoroughly scrubbing his hands and immersing them in the carbolic acid solution, knelt by the side of the couch and completed the operation. The time was 1:00 a. m., and a kerosene lamp was the only source of light. Upon leaving Dr. Knott said, "Well, doctor, of course the patient will not get well, but if he does, that will be the first time that it happened in this town." The patient did get well, and there was no reason why he should not have recovered since the operation was carried out by almost as thoroughly aseptic precaution as came to be employed later.

The question may be raised as to how that could be true. The answer is simple. The operator, while he was no surgeon in the modern acceptance of that term and had no aspiration to be a surgeon, had for three years observed and often assisted in the operations carried out by Professor W. F. Peck. His interests were along the line of pathology and bacteriology, an interest probably induced by the fact that for three years he had been in charge of the preparation of the microscopic material for class demonstrations in histology, pathology, and bacteriology, although they had no recognized place as yet in the college curriculum. He had learned through Pasteur and the works of Sternberg in 1883, and from his own experience, of the efficiency of heat (moist) as a germicidal agent. This, of course, was an observation, but it was just as efficient then as later when its modus operandi was scientifically established.

The first successful operative management of a case of suppurative appendicitis occurred in the practice of Dr. F. J. Murphy during the fall of 1887.

The first hysterectomy was successfully performed here in the summer of 1888. There were then thirty-eight cases of record, but there were probably many more which were not recorded, all of which undoubtedly had been undertaken under a mistaken diagnosis, as was this case. The

lady had been refused an operation by one of the outstanding professors of surgery of the country, who unquestionably recognized the true condition and in consequence of which he based his refusal of an operation. The recovery of the lady awakened the thought that fibroid tumors of the uterus were within the range of operability. Some few years later, Dr. Eastman of Indianapolis, Indiana, came forward advocating such management. Before this all such patients were permitted to die, since hysterectomy was not a recognized procedure of treatment.

Sioux City, at the time referred to, was a town of some 12,000 inhabitants and not possessed of any hospital facilities. None were really necessary until surgical work developed to demand them and the nurses essential for the care of the sick.

These were soon forthcoming, however, as shown by Dr. Warren's histories of the hospitals as they appear in their proper places.

Sioux City at the time was far from being a healthy locality, which will be evidenced by a reference to two diseases; namely, typhoid fever and diphtheria, which thrive in midst of unsanitary conditions.

Typhoid fever was exceedingly prevalent during the late summer and autumn months among the residents of the lowlands, especially in what is known as the Floyd River bottom which was supplied with water through dug wells with outhouses close by. There was no sewer or city water supply in that area at that time.

One doctor is known to have visited thirty-two typhoid fever patients at that many different locations in the course of one day; many of them were lying in small rooms in boarding houses. Contemplate the condition with involuntary fecal and urinary discharges and no nurses or anyone to care for those who were ill. It was not uncommon for patients to be ambulatory to within twenty-four hours or more of their death.

In June of 1892 there occurred a disastrous flood of that whole valley which led to the loss of some twenty-one lives. The health officer at that time was able to state in his annual report to the Board of Health (City Council) that while the flood must be looked upon as a grave catastrophe from the standpoint of the loss of lives, it might be looked upon as a "blessing in disguise" in that it had apparently wiped out typhoid fever through filling all wells and outhouses. There was only one death to report from this cause. The area was later supplied with city water and sewage disposal, and typhoid fever was practically removed as one of the city's hazards.

In the later months of 1892 there was an outbreak of diphtheria, with twenty-three cases in December. The Board of Health (of which the Mayor was the enforcement official) was considering closing the schools. The health officer (who was at that time an adviser of the Board of Health) was asked for his views, and he stated that in his opinion it was unnecessary to close the schools but certainly necessary to enforce proper quarantine. The result was that he was deputized by the Mayor to act in his stead to formulate and enforce such regulations as he deemed necessary. He accepted upon the condition that he be allowed to appoint a sanitary police who should be solely under his control. The intention was to have the quarantine effective, and to do this the sanitary police was to have the patients or parents responsible for them realize that they were imprisoned in their homes until discharged. The sanitary police was to act as a jailer to see that the rules were not broken and the wants supplied, and later he was to see that the disinfection of the place was complete.

Quarantine regulations for various contagious diseases were formulated for the city and sent to the secretary of the State Board of Health for approval, which was granted, and soon thereafter the State Board issued regulations which were very similar.

That rigid quarantine will control and stamp out contagious diseases is illustrated by the results in this instance. There were two cases in January and one in February, and the disease was practically eradicated without closing of the schools.

(To be continued)

FIFTY-FIRST ANNUAL CONVENTION OF THE ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES

(Continued from page 485)

officer of the Royal Australian Air Force, will represent the Australian Army and Navy.

The Netherlands will send First Class Medical Officer M. P. C. Broekhoff, from the Royal Netherlands Military Flying School, to act as observer. Dr. Juan Benavides Dorich, Lieutenant Commander of the Peruvian Sanitary Corps, will represent Peru. Captain Dr. Leo Rabinovic, of the Yugoslav armed forces, will act for that country, and Dr. Jehan Shah Saleh will represent the Iranian Army.

Other nations and the representatives who will be present at the convention are: Greece, Dr. Leonidas Lantzounis of New York; Norway, Captain Wiessener, of the Norwegian Training Camp at Muskoka, Ontario, and Lieutenant Lian, of Camp Norway, Lunenburg, Nova Scotia; Nicaragua, Dr. Desiderio Romany Reyes; Uruguay, Dr. Rafael Capurro, of Columbia University; and the Haitian representatives will be named later.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ESSENTIALS OF SYPHILOLOGY—By Rudolph H. Kampmeier M.D., associate professor of medicine, Vanderbilt University School of Medicine; in charge of the Syphilis Clinic and visiting physician to Vanderbilt University Hospital; with chapters by Alvin E. Keller, M.D., and J. Cyril Peterson, M.D. The J. B. Lippincott Company, Philadelphia, 1943. Price, $5.00.

MEDICAL PARASITOLOGY—By James T. Culbertson, assistant professor of hacteriology, College of Physicians and Surgeons, Columbia University. Columbia University Press, New York, 1942. Price, $4.25.

THE 1942 YEAR BOOK OF GENERAL THERAPEUTICS—Edited by Oscar W. Bethea, M.D., professor of clinical medicine, Tulane University School of Medicine. The Year Book Publishers, Chicago, 1942. Price, $3.00.

DISEASES OF THE SKIN—By Oliver S. Ormsby, M.D., Rush professor of dermatology, University of Illinois, and Hamilton Montgomery, M.D., associate professor of dermatology and syphilology, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, Rochester, Minnesota. Sixth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1943. Price, $14.00.

THE PRINCIPLES AND PRACTICE OF OBSTETRICS—By Joseph B. DeLee, M.D., formerly professor of obstetrics and gynecology, emeritus, University of Chicago, consultant in obstetrics, Chicago Lying-in Hospital and Dispensary, consultant in obstetrics, Chicago Maternity Center; and J. P. Greenhill, M.D., attending obstetrician and gynecologist, Michael Reese Hospital, obstetrician and gynecologist, associate staff, Chicago Lying-in Hospital, attending gynecologist, Cook County Hospital, professor of gynecology, Cook County Graduate School of Medicine. Eighth edition, entirely reset. W. B. Saunders Company, Philadelphia, 1943. Price, $10.00.

THE ANATOMY OF THE NERVOUS SYSTEM—By Stephen Walter Ranson, M.D., Ph.D., formerly professor of neurology and director of Neurological Institute, Northwestern University Medical School, Chicago. Seventh edition, revised. W. B. Saunders Company, Philadelphia, 1943. Price, $6.50.

NEUROSURGERY AND THORACIC SURGERY, Military Surgical Manuals Volume VI—Prepared and edited by the Subcommitttee on Neurosurgery and Thoracic Surgery of the Committee on Surgery of the Division of Medical Sciences of the National Research Council. W. B. Saunders Company, Philadelphia, 1943. Price, $2.50.

SYNOPSIS OF PATHOLOGY—By W. A. D. Anderson, M.D., assistant professor of pathology, St. Louis University School of Medicine; pathologist, St. Mary's Group of Hospitals. The C. V. Mosby Company, St. Louis, 1942. Price, $6.00.

GYNECOLOGY—By Lawrence R. Wharton, M.D., associate in gynecology, The Johns Hopkins Medical School. W. B. Saunders Company, Philadelphia, 1943. Price, $10.00.

BLOOD GROUPING TECHNIC—By Fritz Schiff, M.D., late chief of the department of bacteriology, Beth Israel Hospital, New York; and William C. Boyd, Ph.D., associate professor of biochemistry, Boston University School of Medicine. Interscience Publishers, Inc., New York, 1942. Price, $5.00.

MANUAL OF FRACTURES, Treatment by External Skeletal Fixation—By C. M. Shaar, M.D., Captain, Medical Corps, United States Navy, and Frank P. Kreuz, Jr., M.D., Lieutenant Commander, Medical Corps, United States Navy. W. B. Saunders Company, Philadelphia, 1943. Price, $3.00.

METHODS OF TREATMENT—By Logan Clendening, M.D., clinical professor of medicine, Medical Department of the University of Kansas, attending physician, University of Kansas Hospitals; and Edward H. Hashinger, M.D., clinical professor of medicine, Medical Department of the University of Kansas, attending physician, University of Kansas Hospitals, attending physician, St. Luke's Hospital, Kansas City, Missouri. Eighth Edition. C. V. Mosby Company, St. Louis, 1943. Price, $10.00.

FUNDAMENTALS OF IMMUNOLOGY—By William C. Boyd, Ph.D., associate professor of biochemistry, Boston University School of Medicine. Interscience Publishers, Inc., New York, 1943. Price, $5.50.

NASAL MEDICATION, A Practical Guide—By Noah D. Fabricant, M.D., associate in laryngology, rhinology, and otology, University of Illinois College of Medicine. The Williams & Wilkins Company, Baltimore, 1942. Price, $2.50.

BOOK REVIEWS

UROLOGY IN GENERAL PRACTICE

By Nelse F. Ockerblad, M.D., professor of clinical urology, University of Kansas School of Medicine, senior attending urologist to St. Luke's Hospital, consulting urologist to the Children's Mercy Hospital, Kansas City, Missouri; and Hjalmar E. Carlson, M.D., instructor in urology, University of Kansas School of Medicine, attending urologist to St. Luke's Hospital and Trinity Hospital, Kansas City, Missouri. The Year Book Publishers, Inc., Chicago, 1943. Price, $4.00.

In order to justify the publication of a new book, it must have a purpose. The authors state in their preface that the book was written in an attempt to help the general physician to practice better urology and "to suggest the limits beyond which the best interests of his patients require that he obtain the services of a specialist." A specialist does not do better work because he is a specialist, but he is a specialist because he can do certain things better than others can do them.

The book opens with a chapter on urologic diagnosis and covers in a thorough manner such topics as urine analysis, kidney function tests, examination of the genitalia and diagnostic cystoscopy. Considerable space is wisely given to such a common procedure as catheterizing the male urethra, a procedure which is so often hastily performed and too often in an improper manner. When a catheter has finally been passed through a difficult urethra, the authors advise leaving it in as a continuous drain, a practice which will save not only future struggling by the same physician or another, but also considerable suffering and danger to the patient. A valuable warning is included when they describe the curved metal catheter as the most wicked and dangerous instrument in all surgery.

The entire chapter on infections of the kidney is well worth reading, but it should be followed by the chapter on the sulfonamides, which is left to the end

of the book. The term "nephritis" is used to include those diseases of the kidney which are due to damage from toxins brought to it by the blood stream and is divided into a very practical and simple classification. Glomerulo-nephritis, tubular nephritis, and arteriosclerotic nephritis are all dealt with in a practical manner, making it possible for the general physician to render intelligent treatment to a lesion, often vaguely understood, without reading long-detailed discussions.

The discussion of the numerous causes of hydronephrosis brings this lesion into consideration as a possibility in many problems of differential diagnosis. Since treatment usually requires the services of a trained urologist, it is mentioned only in brief. The same statement holds true in the case of congenital anomalies.

In recommending investigation of all cases of hematuria with a cystoscope, the authors make a valuable contribution to combating a considerable degree of carelessness even today. They also recommend complete examination if cystitis fails to clear up after three treatments. Enuresis is described as always a conduct disorder, but one must remember that anomalous structures, infections, and foreign bodies may also produce poor urinary control. Too many general physicians have an erroneous idea that all cases of prostatitis are gonorrheal in origin. This book goes a long way in correcting this impression.

This volume is characteristic in one respect, which is an important one during these times when every physician is too busy to do much reading; it is very easy to read and understand even when the eyes are heavy with fatigue.

L. E. P.

AMBASSADORS IN WHITE

The Story of American Tropical Medicine

By Charles Morrow Wilson. Henry Holt and Company, Inc., New York, 1942. Price, $3.50.

This is an epic story of American tropical medicine which tells of the health problems of the past, the liabilities of the present, and the prospects for the future, particularly in the light of Latin America as world purveyor of rubber, quinine, and other products. The book is full of facts which grip the imagination and stimulate thought, and one has the feeling that the text is magnificent in its scope and challenge.

It tells of such outstanding medical leaders as Carlos Finlay, Walter Reed, William Gorgas, William Deeks, and Hideyo Noguchi. The author calls them ambassadors in white because they blazed pioneer trails in the unknown fields of tropical medicine and helped "to forge hemisphere solidarity with doctor not dollar diplomacy."

Today almost half of the Latin American population is ill from disease and malnutrition. This is a real menace to the United States because of the ever-increasing military and commercial hemispheric travel, for there is no virus and germ proof door between us and the American tropics.

The health war of American tropical medicine must be won before quinine and rubber sources are available to us. For this, more ambassadors in white are needed and "more American dollars, minds, and hands to move in behind them."

M. C. D.

PICTORIAL HANDBOOK OF FRACTURE TREATMENT

By Edward L. Compere, M.D., associate professor of surgery, Northwestern University Medical School; chairman, department of orthopedic surgery, Wesley Memorial Hospital; consulting orthopedic surgeon, Chicago Memorial Hospital; and Sam W. Banks, M.D., associate in surgery, Northwestern University Medical School; attending orthopedic surgeon, Chicago Memorial Hospital. The Year Book Publishers, Inc., Chicago, 1943. Price, $4.25.

This book accomplishes exactly the purpose for which it was compiled. It presents comprehensibly, but briefly, the field of fracture surgery with a view to covering the treatment of the more common types of injuries in a clear and concise manner. This is accomplished in a large part by the use of free-hand descriptive drawings. The authors bring out most of the newer methods of treatment and certainly most of the newer tried and proved procedures.

This is not a textbook of fractures dealing with all phases of all fractures and treatment. Etiology and pathology and the various methods of treatment following each fracture are usually absent.

It is, therefore, a book which fits well into the hands of the busy general practitioner who is confronted with the care of fractures along with many other responsibilities. For this purpose its brevity, clarity, and good choice of procedures makes it a book to be highly recommended in this field.

W. G. B.

WAR MEDICINE

Edited by Winfield Scott Pugh, M.D., Commander (M.C.), U. S. N. Retired; formerly surgeon, City Hospital, New York. Philosophical Library, Inc., New York, 1942. Price, $7.50.

This volume is a collection of articles pertaining to war medicine, which have been produced by a number of contributors and grouped for easy reference. Each of the articles gives attention to a subject related to the war. Many of them present a general resumé of the subject, stressing particularly the principles involved. Little attention is given to the specific treatment of any of the conditions.

The volume is not sufficiently complete to give one a composite knowledge of war medicine; however, it does give a general insight into the subject. It can be recommended to the physician who is entering military service because it gives enough basic information to give him a perception of war medicine. On the other hand, because of the lack of specific treatment, it is of little value to the civilian physician in the actual care of patients.

L. M. O.

OCCUPATIONAL DISEASES

By Rutherford T. Johnstone, M.D., director of the department of occupational diseases, Golden State Hospital, Los Angeles. W. B. Saunders Company, Philadelphia, 1941. Price, $7.50.

Victor G. Heiser, M.D., in the foreword of this book, states: "The author of this volume has collected and brought up to the minute an enormous amount of information that is presented clearly and comprehensively, based largely on his own practice and supported by the experience in this country and abroad."

A very important treatise on the purpose of workmen's compensation, the administration of it and the function of the physician as related to it, occupies the first portion of the book. Methods of evaluating disability are discussed fully and clearly. The technicalities of the various state laws are enumerated and explained. What might otherwise be a rather dry discussion is enlightened by the addition of an illustrative case report of a model type.

Part II of the book takes up the detailed information concerning gases, solvents, and fumes. In each of the chapters of this part of the book the offending substance is defined as to its chemical constituents and its place in industry. The pathology produced by it, including latent and delayed effects, is discussed. Illustrative cases are usually included and the medicolegal angle is stressed. Finally, the treatment is thoroughly outlined.

This same general literary treatment is carried out in Part III relating to "The Metals" and also in Part IV devoted to "The Dusts." A very interesting treatise of two of the most discussed industrial subjects is presented in Part V, which is limited to "The Industrial Back" and "Hernia." Part VI outlines the industrial dematoses. Part VII takes up physical traumas such as "Occupation Cancer," heat and climatic affection, electrical injuries, and caisson disease. In the final Part VIII the medicolegal relationship of trauma to disease, neurosis, malingering, and preemployment examinations are discussed. An appendix presents a table of toxic thresholds of common industrial substances.

One of the most important uses of this book might be its utilization as a reference work in gleaning detailed information concerning the diagnosis and treatment of pathology caused by the various industrial chemicals which are used so universally.

The industrial physician or the general practitioner, who may see a good number of industrial workers in his private practice, would both be repaid by study of that information contained in this volume.

J. C. P.

ROENTGENOGRAPHIC TECHNIQUE

A Manual for Physicians, Students and Practitioners

By Darmon Artelle Rhinehart, M.D., professor of roentgenology and applied anatomy, School of Medicine, University of Arkansas; roentgenologist to St. Vincent's Infirmary, Missouri Pacific Hospital, and the Arkansas Children's Hospital, Little Rock, Arkansas. Third edition, thoroughly revised. Lea & Febiger, Philadelphia, 1943. Price, $5.50.

The third edition of this well-known book on roentgenographic technic consists of about four hundred fifty pages. It is printed with clear type and on good quality paper. The illustrations are of excellent quality. A considerable portion of the text has been rewritten and many new diagrams and illustrations have been added. Other new subjects are bronchography, sailogrophy, myelography, and ventriculography. One might wish there were illustrations to give the student technician an idea of what is expected on the films in these examinations.

The technic of making dental films is described and well illustrated. This is important, especially to many technicians in smaller laboratories where dental units are not available. An unusual and unorthodox method of mounting dental films is described, which is likely to be confusing to many technicians.

On the whole, the book is well written with clear descriptions and illlustrations of the various positions. It is a valuable book for the student technician, and we predict that this edition will be as well received as the previous ones.

J. V. P.

MEDICAL MALPRACTICE

By Louis J. Regan, M.D., LL.B., member State Bar of California. The C. V. Mosby Company, St. Louis, 1943. Price, $5.00.

This is a small volume dealing with the legal essentials of medical malpractice. It is a concise, well systematized outline of what constitutes malpractice and gives advice as to how physicians may avoid it. If every physician were to read this book, many malpractice actions might be prevented. I feel that every physician's library should list this or some other equally instructive volume dealing with his legal responsibilities toward his patients.

F. A. E.

The JOURNAL
of the
Iowa State Medical Society

VOL. XXXIII DES MOINES, IOWA, NOVEMBER, 1943 NO. 11

INDUSTRIAL MEDICAL RELATIONSHIPS*

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The medical profession, like many other groups, is faced with new demands and changes now, as well as in the postwar era. In periods of stress or catastrophe, such as war or depression, emergencies and changed conditions necessarily create new problems and focus attention on previously unnoticeable situations. With the greater governmental control necessary to culminate hostilities successfully, an opportunity is presented to sociologic planners to force changes, changes which have been merely theoretic and untried. These suggested plans are not individualized but are rather for groups of the population.

The spotlight early was turned on the health of workers in war industries by virtue of the fact that production was to play a vital part in the war with the difficulties of providing an adequate labor force. It has become apparent that the health of the workers in war industries is increasingly important. Attention to this matter has brought into sharp focus the facts that here is a different approach for medical endeavor and that directly and indirectly it is having far-reaching effects on the practice of medicine.

The new approach is that of studying and prevention of illness in adults. Physicians in private practice have been concerned for the most part with the treatment of disease. Health departments have given their attention to maternal and child welfare, infants, and sanitary measures. Great advances have been made. Now a vast new field for the prevention of illness in adults has opened up through industry.

It is not just a band wagon to ride for the duration of the war. There has been a gradual development of industrial health practices since the first workmen's compensation law was passed in 1911. The results have been increasingly good. The necessities of war with the concurrent publicity have brought to a position of prominence the advantages long known to the few physicians practicing industrial medicine for years.

At the direction of the House of Delegates of the American Medical Association, there was established in 1937 the Council on Industrial Health. Like all other departments in the organization, one of its functions is to assist medical developments along lines which will bring greatest benefits to the public and serve the interests of the medical profession. One of the acts of the Council was to outline the procedure for physicians in industry. With due deliberation and decision they have stated that "the purpose of medicine in industry is to promote the health and physical well-being of industrial employees. These objectives should be accomplished by:

1. Prevention of disease or injury in industry by establishing proper medical supervision over industrial materials, processes, environments and workers.

2. Health conservation of workers through physical supervision and education.

3. Medical and surgical care to restore health and earning capacity as promptly as possible following industrial accident or disease.

These three points, when analyzed, have a comprehensive meaning. They also indicate the methods of carrying out a medical program in industry.

Prevention of disease or injury by proper medical supervision means that a physician will have the interest and take steps to acquaint himself with the hazards of the materials and processes in the plant. On the basis of this knowledge he will supervise the control of the working environment and carry out the procedures for early detection and elimination of occupational disease. Concurrently with getting the environmental conditions under the best possible control, the attention to the workers will consist of periodic physical examina-

*Presented before the Polk County Medical Society at its meeting September 15, 1943, at Broadlawns General Hospital, Des Moines, Iowa.

†From the Council on Industrial Health of the American Medical Association.

tions. These examinations will include specific tests to measure body damage from the exposures such as basophilic aggregation and urinalysis for lead and urine sulfates for benzol. Proper supervision cannot be carried out without knowledge of industrial etiology. Uninformed physicians have had a tendency to either overlook the possibility of industrial etiology or have jumped to unfounded conclusions.

The second point, "health conservation of workers through physical supervision and education," enters into the realm of the newer concept of industrial health. And it is through the application of these steps that the medical profession can contribute the most toward improving worker health.

Physical examinations are basic as in other branches of medical practice but they have taken on added significance and implications in industry. Whereas previously pre-employment physical examinations were used to skim the cream from the labor supply, they now have a different purpose, a different name, "preplacement examinations," in order that the physical condition of the prospective worker may be correlated with the physical demands of the job. Here again it is required that the physician have intimate knowledge of industrial conditions, to be gained only by first hand information in the plant. Where such job placement of handicapped workers is being efficiently effected, industry is having an improved experience. The extension of the practice of utilizing the residual ability of physically substandard workers can lead to a human economy which will have far-reaching effect in the equitable establishment of our future social structure.

There are certain definitely indicated steps in these procedures, particularly in relation to case-finding, which have been fully examined by the Council on Industrial Health. Their inclusion in a program is not only highly desirable but essential to achieving maximum health benefits for the workers. The technic of physical and mental evaluation for placement should include all steps necessary to reveal substandard conditions of the worker. Obviously, to be properly carried out, this entails the cooperation of specialists and family physicians. Although the industrial medical department is an excellent place for case-finding, it is not the responsibility of industry to provide remedial medical care for nonoccupational conditions discovered. As these conditions which need and are amenable to medical attention are identified, the worker is referred to the physician of his choice for further study and care. Proper follow-up through the industrial medical department to further urge medical care is essential.

This case-finding implies the identification and correction of pathologic conditions in their incipient or minimal stage. It is in this stage that the greatest health and economic savings can be made for the worker. Two phases of this case-finding program in industry have received considerable emphasis not only because of their importance by incidence but also because of the attention which has been focused upon them and the methods of operation entailed. These are pulmonary tuberculosis and venereal disease. The principles of management of a venereal disease program in industry have been well defined, established, and accepted.

The use of photofluoroscopic units, 35 millimeters and 4x5, in tuberculosis case-finding is spreading rapidly. As a screening process and screening process only, it is a definitely forward step. Like every innovation in medical procedure, regardless of its merit and justification, experience is necessary to formulate the proper technic and principles of practical application. The reports of 125,190 chest examinations with 35 millimeter units by the United States Public Health Service disclosed 1,631 cases of significant pulmonary tuberculosis or 1.3 per cent. The most important factor is that 53.6 per cent of the cases were in the minimal stage, whereas the usual case load of health agencies from other methods of diagnosis consisted of only 10 to 15 per cent minimal cases with the balance being moderate or far advanced. The reasons for this shifting of percentage are obvious; tuberculosis is more prevalent in the age groups in industry and also chest roentgenograms are a more efficient method of diagnosis. From the economic standpoint, the director of the Division of Tuberculosis of the Virginia State Health Department stated that in taking 45,000 chest roentgenograms in industries, the cost for finding one case of tuberculosis was $25.00 as against $150.00 by previous methods used. He also pointed out that more minimal tuberculosis was found which required only a fraction of the treatment of those more advanced. It must be recognized that tuberculosis is only one of many chest conditions that will be discovered.

This is the type of preventive medicine which industrial health is coming to mean. The principles involved apply to all case finding. That is, in the event that a chest film suggests pathology, the worker is referred to his private physician for detailed examination, diagnosis, and treatment. Thereafter it is the responsibility of physicians in private practice to supervise the patient in the course of the disease he may have. In other words, doctors are being given the opportunity of treating patients in the early stages of their disease. It has been the experience of roentgenologists where tuberculosis screening surveys have been made

that there has been an increase in requests for their diagnostic services.

Physical supervision, case-finding, and education among industrial workers are sound medical procedures, which if properly conducted, are of definite benefit to the public in an ethical manner as well as giving physicians the opportunity to practice better preventive medicine.

The third point, that of medical and surgical care following industrial accidents or disease, is important. The division of responsibility under workmen's compensation laws is accepted. Rehabilitation and the early return to work of persons with occupational injuries and diseases have a direct relationship to war production. But it must be remembered that treatment enters in only when the preventive program fails. This, then, is in brief, industrial health. Its application to all industries, large or small, is the responsibility of the medical profession. It has been estimated that 90 per cent of the physicians have direct or indirect contact with industry. Most small plants are receiving what medical service they have from physicians in private practice. It, therefore, falls upon the medical profession in general to further this improved preventive service with industry and to further prepare itself to render such service on demand.

When one considers the attempted social developments in the last six or more years, it is apparent that there have been changes, legislative and in public thought. The matter of medical care has become interwoven in the plans of all groups until it has gradually assumed a position of major importance. It was indicated early by the passage of the Social Security Act and subsequent attempts to include compulsory health insurance that these developments would be in and around industry. The most strenuous, by virtue of the administrative setup, confronts us now. Industry, labor and medicine are inextricably involved and their interests are mutual.

The course of action is clear, the establishment of medical programs in industry along accepted ethical lines. When one realizes the scope and implications of such programs of industrial health, it becomes evident that they are a solution in a positive manner when widely in force.

Extension of these services requires an effective cooperative plan carried out by medical, industrial and labor organizations. We are fortunate at this point in that we have the experience of successful plans elsewhere in the country. They have been designed to improve the medical service in small plants particularly. In exercising the leadership which is the responsibility of the medical profession and medical organizations, the following steps are suggested:

1. The committee in the county medical society should request instruction from the committee on industrial health in the state medical association and from the state division of industrial hygiene. Preferably, a preliminary conference should be held with representatives of these two agencies to establish:

(a) The lines of relationship and responsibility already existing between government, industry, labor, and the medical profession.

(b) The principal industrial health problems of the community as a basis of remedial action.

(c) The proper organization and employment of local medical and health facilities.

(d) Supplementary services which can be called on from sources outside the community itself.

The needs of small industry should be particularly stressed.

2. The names of all physicians now serving or willing to serve in industry should be determined. These physicians should be invited to attend a meeting at which the results of the preliminary conference just described can be reported and general details of the program presented for discussion and adoption.

3. Conferences should be held with other essential professional groups, particularly industrial or public health nurses and industrial hygienists, in order that dependable arrangements for services provided by these groups may be made.

4. The county medical society committee should then request a conference with the executives or a representative committee of the local manufacturers' association, chamber of commerce or both to describe the program and to determine how the medical profession and the local health department can accelerate and improve production through appropriate health activity. Specifically, the following items should be discussed:

(a) The essentials of industrial health service as outlined.

(b) The health and economic benefits of such a service.

(c) Methods of supplying this service.

(d) Probable cost.

The committee of the manufacturers' association can well be asked to act permanently as adviser to the county medical society committee.

5. Active cooperation should be secured from local labor organizations both in respect to the conduct of medical services in the plant and to the establishment of a program of health education in the community. Health education should emphasize particularly nonoccupational factors which are of importance to the health of workers: nutrition,

housing, proper use of leisure time, recreation, and other related activities. The committee representative of local labor organizations should be requested to assume a considerable share of responsibility for the health educational aspects of the program and should regularly act in an advisory capacity to the committee on industrial health of the medical society.

6. The next procedure should be an open meeting conducted jointly by the county medical society and the local manufacturers' organization or chamber of commerce, to which employers, physicians, or other professional agencies, representatives of labor and, in fact, the community at large can be invited. This meeting will provide means for promoting the program widely throughout local industry.

7. Following preliminary organization, the activities of the county medical society's committee on industrial health will fall mainly under four major headings:

(a) Investigation of local causes of lost time in industry as a basis for necessary remedial service.

(b) Coordination of community industrial health facilities.

(c) Frequent education of the public about the benefits of an industrial health program.

(d) Continuous education of the medical profession as a means for elevating standards of industrial health service.

In all other ways the committee should exercise that degree of initiative and leadership which will properly represent medicine's responsibilities and opportunities in this important field.

The activities thus organized and instituted by your committee on industrial health will require the active interest, cooperation, and participation of every physician in the society. The interests of the public and profession demand that we make plans and take an interest in matters which are not clinical yet do affect the practice of medicine. We should look for the problems and make plans positive in character. If we have been smug as individuals in our scientific pursuits, we can no longer do so. If our purposes, principles, and ethics have been misinterpreted by the public, this false impression must be corrected. Public relations consists of doing more and more in such a manner that it will favorably impress the public. It is of no avail if plans are made on a national, state, or local scale and physicians as individuals ignore, fail to cooperate, or even act in a contrary manner to these plans. The most recent example of such action is that in relation to medical service to dependents of servicemen. Some medical organizations have taken a definite stand after serious consideration of the implications, yet there are physicians, some of whom took part in the deliberations of the problem, who have not abided by the decision of the group. Such action can only be interpreted as a desire for immediate monetary gain, without thought to the unfavorable light in which it places them as well as the whole profession, to say nothing of the jeopardy to the future of medical practice.

True, this has nothing to do with industrial health, but is it an example of the cooperation to be expected in the plans now being made in industrial health, health insurance, and other issues? The practice of medicine stimulates an overdevelopment of individualism in making decisions of judgment in the care of patients. This individualism can be a serious handicap to medical planning. Cooperation and solidarity of the medical profession are much needed now.

Through industrial health activities, the medical profession has an opportunity to render valuable service to the public, and by concerted action solve innumerable problems with which we are confronted. By active planning, with cooperation from physicians and industry, the demands for legislative changes will be lessened. No other field of medical endeavor can contribute as much to the winning of the war.

SEROLOGIC REACTIONS IN NON-SYPHILITIC INDIVIDUALS*

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Through the appraisal program of the United States Public Health Service, the state serologic laboratories have reached a remarkable level of standardization. When testing the sera of known syphilitic individuals, there is very little variation in the sensitivity of these laboratories from the control laboratories. When testing sera from presumably nonsyphilitic, healthy individuals, it is rare indeed that the laboratories find false reactions.

This record of performance over the past several years has been so impressive that the medical profession, health officials, and the public have come to regard serologic tests as having a validity which is all but overwhelming. In fact, there has come into use the unfortunate term "laboratory syphilis" applied to cases in which nothing in the

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history or clinical findings support the specific significance of the positive serology.

Reasoning that laboratories which find no positive reactions in the appraisal test sera will find no false positive reactions in any sera, the tendency is to attach a sinister significance to all positive reports, regardless of all other factors.

Although in the majority of cases such a conclusion may be warranted, the assumptions on which it is based are not universally true. It is obvious that an appraisal is possible only if the serologic status of the specimens is definitely known. All syphilitic sera used are from proved cases. The normal sera used are from healthy individuals of negative serologic status. Hence, in the appraisals there are no specimens included which cover the problem cases with which we are concerned in routine testing on a wholesale basis. In reasoning from the known to the unknown, there is always an element of possible error, and it behooves us to reduce this possibility to the minimum.

In using the serologic appraisal performance as a ground for conclusions, two assumptions are involved; namely,

1. That for practical purposes, positive serologic tests mean syphilis.

2. That exceptions to this conclusion are too few to be important.

All present-day statistics relative to the frequency of syphilis in the United States are based upon these two assumptions; so are the premarital and prenatal health examination laws, and, until recently, the interpretations used in the case of applicants for work in war industries.

On the basis of these two assumptions, during the past few years thousands of individuals have been refused marriage licenses, rejected for service with the armed forces, refused employment in industry, or subjected to treatment for syphilis. Tens of thousands have been tortured mentally with the belief that they had syphilis.

That the first of these assumptions goes too far is evident from the serologic reactions of fluids other than human sera. Animal sera and even plant juices have been found reactive. The results of serologic tests of several hundred specimens of bovine blood are given in Table I. These examinations were made at the State Hygienic Laboratory at Iowa City, whose performance in the aforementioned annual appraisals is a matter of record. There is no reason to believe that the results reported would have differed had the specimens been examined by the same tests performed by any other appraised laboratory.

It will be noted that in excess of 95 per cent of these cows proved to be serologic reactors by the flocculation tests. Unless we are to conclude that syphilis is widespread among animals, positive tests do not constitute *direct* evidence of the existence of that disease. It is true that among human beings the occurrence of reactors in routine examinations is limited to a small percentage. It is true also that syphilis has been found to be the most consistent and persistent cause of such reactions in man. Therefore, the occurrence of serologic reactions in human sera provides *presumptive* evidence of the existence of syphilis. Presumptive evidence, however, is the *most* that the serologic laboratories can now provide. It is when we assert that this presumptive evidence constitutes absolute evidence that we invite errors.

TABLE I
Serologic Reactions of Cow's Blood Examined at the State Hygienic Laboratory, Iowa City

Test	Cows Tested	Positive	Doubtful	Anticomplementary	Negative	Total Reactors P & D	Per Cent Reactors P & D
Kline Diagnostic.....	414	413	0	0	1	413	99.7
Kahn Presumptive...	365	361	2	0	2	363	99.4
Kahn Standard.....	349	313	19	0	17	332	95.1
Kolmer Complement-fixation.....	399	22	7	8	362	29	7.2

That the second assumption is arbitrary is indicated by the frequency of contradictory serologic tests, and by the emergency nature of the decisions which hinge upon their interpretation. It is by no means a matter of negligible importance if, because of nonspecific serologic reactions, a marriage license is refused or there is undermined the love and trust upon which a happy marriage is based. Nor is it of negligible importance if an expectant mother is subjected to antileutic treatment on the basis of nonspecific serologic reactions. Pregnancy involves potential hazards to the kidneys and antileutic treatment adds to that risk. It is by no means a negligible matter if men and women are rejected for service in the armed forces because of nonspecific serologic reactions. The mental anguish, syphilophobia, and expense of treatment resulting from erroneous diagnoses are far from negligible matters.

The frequency with which reagin has been detected at either positive or doubtful levels by the Kline, Kahn, or Kolmer technics applied to routine specimens is shown in Table II.

Regardless of the significance of reagin in individual cases, it is possible to state that the total number of reactors represents the maximum amount of syphilis in these groups which is detectable by serologic means. However, as will be

shown, there is reason to believe that an appreciable number of these reactions are not due to syphilis at all, but are of nonspecific origin.

TABLE II

Frequency of Reagin in Routine Serologic Testing of Specimens by Kline, Kahn, or Kolmer Technics at the State Hygienic Laboratory, Iowa City, Year Ending June 30, 1943

Specimen	Total Tested	Positive	Doubtful	Total Number	Reactors Per Cent
Selective Service...	142,869	2.2	0.6	4,031	2.8
Prenatal.....	39,809	0.7	0.4	445	1.1
Premarital.....	22,176	0.7	0.2	211	0.9

The frequency of nonspecific serologic reactions can be arrived at only indirectly. In Table III are shown the results of a study of the reactions found in 993 sera from individuals who were known to have syphilis, and whose sera were subjected to the three tests indicated; namely, Kline, Kahn, and Kolmer tests. These sera were from those sent to the participating laboratories by the United States Public Health Service during the appraisals of 1939 to 1943 inclusive.

It will be noted that 97 or 9.7 per cent of these gave contradictory serologic reactions and that 13.5 per cent were entirely negative by all tests. The reaction is called contradictory when a specimen of serum is subjected simultaneously to multiple serologic tests and at least one standard test shows the presence of reagin, whereas at least one standard test is negative. In this particular group of specimens, the number of negative reactors far exceeded the number of contradictory reactors so that there was little to choose between the diagnostic significance of the contradictory and the negative reactions.

TABLE III

Results of Multiple Tests Simultaneously Applied to 993 Sera of Known Luetic Individuals by Kline, Kahn and Kolmer Technics, State Hygienic Laboratories, Iowa City

Multiple Tests	Number of Sera	Per Cent of Total
I. All 3 tests showed reagin to be present (either positive or doubtful levels).....	762	76.7
II. Two tests showed reagin, one test negative...	60	6.0
III. One test showed reagin, two tests negative...	37	3.7
IV. No test showed reagin, all negative.....	134	13.5
	993	99.9

In Table IV is set forth the frequency of contradictory serologic reactions expressed in percentages of the total reactors found. It will be observed that these percentages range from 11.3 to 45.0 per cent of the *reactors* in various groups.

TABLE IV

Frequency of Contradictory Serologic Reactions Among Reactors Subjected to Multiple Tests (Kline, Kahn, Kolmer) by State Hygienic Laboratory, Iowa City

Reactors	Contradictory Serology Percentage of Total Reactors		
	2 Positive 1 Negative	1 Positive 2 Negative	Total
I. Known Luetic Sera.....	5.0	6.3	11.3
II. Selective Service*.....	4.8	10.4	15.2
III. Prenatal*.....	14.0	25.0	39.0
IV. Premarital*.....	18.0	27.0	45.0

*Note: The contradictory reactions were confirmed by at least two consecutive tests.

Contradictory reactions may persist stubbornly, or they may disappear without antiluetic treatment. When they disappear without treatment, three possible explanations may be offered:

1. They were due to syphilis which, during the testing period, passed into a latent, nonreacting stage.
2. They were due to syphilis which, during the testing period, has undergone spontaneous cure.
3. They were due to causes other than syphilis which ceased to exist during the testing period. This would seem the most probable explanation.

That contradictory serologic reactions will disappear without antisyphilitic treatment is evident from the following Cases I and II. In the first instance a period of about eighteen months was required. The reversal may take place spontaneously in less time, however, as is exemplified in Case II where about seven weeks were required.

In the following case reports the degree of reaction is indicated as Doubtful (D) Positive (P_2 P_3 P_4). In the Kolmer test the readings of both tubes are shown; for example, P_{22} or P_{44}.

Case I—White male, age 23, premarital
(No. 689 on 11-25-40; no diet, no treatment)

	Kline	Kahn	Kolmer	
11-25-40	P_4	P_4	N	
12-3-40	P_4	P_4	N	
He went to another state and married in spite of the serology; his bride had a negative serologic reaction.				
2-12-41	P_4	N	N	
2-18-41	P_4	P_4	N	Kahn verification biologic
4-25-42	D	D	N	
5-4-42	D	D	N	
5-29-42	N	N	N	
6-10-42	N	N	N	Kahn verification biologic

Case II—White female, single, age 21
(No. 15 on 6-11-43; no diet, no treatment)

	Kline	Kahn	Kolmer
6-11-43	P_2	P_4	O
6-17-43	P_4	P_3	D
7-1-43	D	D	N
7-27-43	N	N	N

That contradictory serologic reactions may disappear without antisyphilitic treatment coincident with termination of pregnancy is illustrated by Case III.

Case III—White female, married, age 29
(No. 2 on 1-31-41; no diet, no treatment)

	Kline	Kahn	Kolmer
1-31-41	N	N	P_4 Kahn Presumptive P_4
2-3-41	N	N	P_{22}
3-4-41	N	N	N after delivery

Some years ago during the routine examination of students a young man gave a 4 plus reaction by Kahn and Kolmer. This constituted the only evidence of syphilis. He was an exceedingly frank young man and there was no reason to doubt his denial of exposure. He was employed in a local meat market where he had developed the habit of eating small pieces of raw meat from the cutting block. On the bare chance that a high protein diet *might* affect his serology, he was cautioned to discontinue this practice. No antiluetic treatment was given. Within a few weeks he reverted to a complete negative.

Since that time, in premarital, prenatal, and other cases where a decision as to the significance of a repeated contradictory serology was a matter of urgency, we have employed a low protein diet as a trial method of ascertaining quickly whether a reaction was nonspecific. The patient is placed on a milk-free, meat-free diet, with fresh vegetables and fruit juices ad lib, and six to eight glasses of water daily for three days. On the following day another specimen of blood is submitted for serologic test. The serologic findings may or may not be affected thereby. If the reactions disappear entirely, one may conclude either that the reactions were of nonspecific origin or that the depletion diet proved to be a singularly effective way of treating that particular patient to a negative stage. In the light of our present knowledge, the first conclusion seems to be the more tenable. However, the explanation is not so simple as this because thus far, when the serology has reversed under dietary restrictions, we have not been able to restore it to a positive reaction by a high protein diet. Cases IV and V illustrate this. None of the following cases had any specific drug therapy.

Case IV—White male, married, age 31, Reserve Officer
(No. 2046 on 3-4-41; rejected for active service because of the serologic findings)

	Kline	Kahn	Kolmer
3-4-41	P_2	P_4	N Kahn Presumptive P_4
3-10-41	P_2	P_4	N Kahn Presumptive P_4
3-19-41	N	P_4	N Kahn Presumptive P_4 Kahn verification: syphilitic
Low protein diet ordered.			
4-1-41	≠	N	N
4-19-41	N	N	N After regular diet
4-21-41	N	N	N
4-23-41	N	N	N After 2 days of high protein diet

Case V—White female, single, age 20
(No. 9 on 1-26-42; hospitalized; suspected diagnosis of infectious mononucleosis which was not confirmed)

	Kline	Kahn	Kolmer
1-26-42	P_4	P_3	O
1-29-42	P_4	O	O
1-31-42	P_4	P_4	N
2-2-42	P_4	P_4	N
2-9-42	P_4	P_4	N Kahn verification: biologic after 7 days of low protein diet
2-20-42	P_4	P_4	N Kahn verification: inconclusive
2-27-42	N	D	N After 15 days of low protein diet
4-2-42	N	N	N
4-17-42	N	N	N After 4 days of high protein diet

Case VI—White male, age 26
(No. 2125 on 12-16-41; rejected by selective service because of serologic reaction)

	Kline	Kahn	Kolmer
12-16-41	N	N	P_{44}
12-24-41	N	N	P_{44}
12-17-41	N	N	P_{44}
2-6-42	N	N	N After low protein diet
2-9-42	N	N	N

Case VII—White female, single, age 20, premarital
(No. 316 on 4-30-41)

	Kline	Kahn	Kolmer
4-30-41	P_4	P_3	N
5-3-41	P_4	P_3	N
5-13-41	≠	N	N After low protein diet
5-21-41	N	N	N

Case VIII—White female, age 25, married, prenatal
(No. 565 on 5-6-41; husband negative)

	Kline	Kahn	Kolmer
5-6-41	D	O	P_{44}
5-12-41	N	N	P_{44}
5-24-41	N	N	N After low protein diet

Case IX—White male, age 29
(No. 721 on 5-2-41)

	Kline	Kahn	Kolmer
5-2-41	P_4	P_4	N
5-7-41	P_3	P_4	N
6-6-41	N	N	N After low protein diet

Case X—White female, single, age 20 (sister of Case XIII)
(No. 836 on 1-12-43; applicant for WAVES)

	Kline	Kahn	Kolmer
1-14-43	N	N	P_{44}
1-16-43	N	N	N After low protein diet

Numerous instances have been encountered in which one of the tests might persist, but others revert to a negative. The following cases are examples:

Case XI—White female, married, age 28, prenatal
(No. 582 on 2-9-43)

	Kline	Kahn	Kolmer
2-9-43	P_4	O	D Kahn Presumptive
2-19-43	P_4	D	D
4-5-43	P_3	N	N After low protein diet Staten Island also reported Kahn negative

Case XII—White female, married, age 22, prenatal
(No. 416 on 11-17-41; husband negative)

	Kline	Kahn	Kolmer
11-17-41	P_4	P_3	N
11-24-41	P_4	P_4	N
12-2-41	D	D	N
12-22-41	N	P_4	N After low protein diet Kahn verification was biologic

Case XIII—White male, age 18 (brother of Case X)
(No. 891 on 12-16-42; married, wife negative; applicant for enlistment in Marine Corps)

	Kline	Kahn	Kolmer
12-16-42	D	N	P_{43}
12-18-42	D	D	P_{44}
12-31-42	P_2	P_3	O
1-6-43	D	N	P_{44}
1-9-43	N	N	D After low protein diet Kahn verification: negative

Case XIV—White female, single, age 18, premarital
(No. 207 on 7-9-41)

	Kline	Kahn	Kolmer
7-9-41	P_4	N	N Kahn Presumptive P_4
7-12-41	P_4	P_4	N
7-22-41	P_4	D	N After low protein diet
8-1-41	P_4	N	N After 2nd low protein diet

These individuals, in all of whom the serologic reactions provided the sole reason to suspect syphilis, illustrate the group which underwent complete or partial reversal, as demonstrated by a series of consecutive serologic tests. In addition we have record of twenty complete reversals occurring in contradictory serologic reactors among the selective service group, as confirmed by tests of from three to eight sequences.

The Student Health Service has found the reversals to be sufficiently frequent to justify the policy which will be mentioned later.

In addition there are many other reversals which we were not able to follow because the physicians acted upon the first reversal report and no subsequent specimens could be secured.

It is well known that contradictory serologic reactions and even intermittent reversals to serologic negative reactions may and do occur in patients with syphilis of long standing and in patients under prolonged treatment. To what extent the fluctuating reagin in these individuals is of syphilitic rather than biologic significance, no one can say. However, in dealing with young adults such as students, the premarital group, and the prenatal group, we are not usually dealing with old syphilis. Such syphilis as is encountered in these groups of individuals, for the most part, is either congenital or recently acquired. In either event the serologic picture is not likely to have been obscured by treatment and actual infections should provide clear-cut serologic reactions. It will be observed that in the sera of known syphilitic individuals in Table I, out of the 859 reactors, 762 or 88.7 per cent showed reagin by all three tests. In the young adult group under discussion, those who really have syphilis should show an even higher percentage of multiple reactors, because so few of them have undergone any treatment.

Based upon the observations summarized, and supported by cases of reversal which are constantly being observed, the Student Health Service, during the past four years, has dealt with reactors among the students as follows:

All students with first reactions are called in for a repeat test. If the repeat test confirms the existence of the reactions, the procedure is as follows:

1. Those in whom all multiple tests show strongly positive reactions in two consecutive specimens: Although occasionally reversals may occur in this group, a presumptive diagnosis of syphilis is made and maintained until the contrary has been proved. The situation is explained to the student, the history explored, careful physical examination made, and a spinal fluid Wassermann secured. Even with everything negative, except the persistently strong multiple blood serologic reactions, antiluetic treatment is instituted.

2. Those in whom the multiple tests show contradictory reactions in two consecutive tests: If the serologic positive reports in the contradictory reactions are supported by the history and by physical signs of recent infection, antiluetic treatment is instituted.

If, however, the serologic positive reactions are not so supported, although the possibility of syphilis must still be considered, these contradictory reactions are tentatively interpreted as being nonspecific until proved otherwise. As has been indicated above, many of these individuals will show serologic reversal to a complete negative over a period of weeks or months. They are kept under observation with repeated serologic tests, but without antiluetic treatment. If there is any urgent reason for a decision, they are placed upon the dietary restrictions mentioned above, and their subsequent serology studied. Reversal to a negative state, if shown to persist, is regarded as eliminating syphilis from further consideration.

If the contradictory reactions persist for three months, the family physician is asked to secure blood specimens from the parents and siblings to ascertain whether familial syphilis exists. A spinal fluid Wassermann is secured from the patient. Quantitative serologic tests are requested.

Unless through these means there is reason to believe that the reactions are due to syphilis, such a diagnosis is held in abeyance as long as the serologic reactions remain contradictory.

COMMENT

We desire at this time to place on record the following observations:

1. Of the serologic *reactors* subjected simultaneously to multiple tests, from 11.0 to 45.0 per cent in various groups have been found to give contradictory reactions by Kline, Kahn, and Kolmer tests.

2. These contradictory reactions appear with considerable frequency among individuals in whom the serologic reports constitute the sole reason for suspecting syphilis.

3. Among these nonsymptomatic contradictory reactors, complete spontaneous serologic reversal to a negative state has been observed to take place after periods ranging from weeks to months.

4. This reversal to a negative state has been observed in some instances to follow promptly the use of a meat-free, milk-free, abundant liquid diet, including fresh vegetables and fruit juices. Perhaps the dietary restriction merely reduces the time required for reversal already in progress.

The small number of cases followed does not permit any generalizations, except to provide a warning to physicians who place their reliance *solely* upon serologic reports. It is equally as much the responsibility of the physician to rule out syphilis as it is to rule it in. If the serologic reactions can be caused to disappear when dietary factors are changed, one thing appears to be reasonably certain; namely, that whatever is the causative factor in the reactions, it is not active syphilis.

A SURGICAL AND CLINICAL CONTRIBUTION TO RIGHT-SIDED PAIN*

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As the result of promiscuous appendectomies for right-sided pain by incompetent or unconscientious members of the medical profession, a definite reaction developed against surgery in this type of case. Now we find these cases almost universally attributed to the "spastic colon." As a result of this the unfortunate individual who cannot be cured by belladonna, phenobarbital, metamucil, or diet, gets no relief. As in all similar violently separated views, there must gradually develop intelligent compromises for certain cases. A surgical solution with constantly satisfactory results in a certain group of these cases is the contribution we hope to make in this paper. It is offered after years of work on this problem and with the background of a great many successful results and practically no failures in the cases selected in recent years.

We have no intention of going into a differential diagnosis of right-sided pain except in those cases too often called chronic appendicitis. The assumption is made that pains in the kidney, ureter, and pelvis, as well as in tumors and neurological conditions and other pains foreign to the ileocecal region, have been eliminated by proper diagnostic procedures. Three accepted facts stimulated our original interest in this work. In the first place we saw, as others have, that a great many patients with this type of pain had had previous appendectomies without results. In the second place many appendectomies with negative pathologic reports gave excellent clinical results. The last item was that in many carefully controlled medical cases of right-sided pain called "spastic colon," the right-sided pain persisted.

All three of these items led to our interest and results in this problem. Clinically cured right-sided pain resulted from simple appendectomies for nonpathologic appendices. Something beside the actual removal of the appendix took place which resulted in the cure. The operator himself was usually unaware of this and scoffed at the negative diagnosis of the pathologist. Whatever it was, it did not happen constantly or the anatomy must have varied because of the many failures. This needed an explanation. That some anatomic condition must be present in many of these cases seemed highly probable because of the cases so carefully controlled dietetically and medically in which this right-sided pain persisted.

Clinical and operative observation with this in mind over many years resulted in the conclusion we offer here; namely, that the problem was anatomic. Some variations of an isolated nature have been reported in this area, usually in connection with some other problem, in an attempt to make an isolated anomaly account for too large a clinical field. To the best of our knowledge these factors, usually embryologic in origin, have never been properly grouped for clinical analysis and use.

Let us inject a little anatomy of this region at this point. Normally the cecum, ascending colon, and appendix are completely covered by peritoneum. In most people the posterior and lateral portion of this peritoneum fuses with the parietal peritoneum so that the ascending colon down as far as the cecum and occasionally including part of the cecum appears to be attached to the lateral posterior part of the abdominal cavity, with this attached portion appearing to be extraperitoneal. It holds the ascending colon up in the abdomen and most or all of the cecum out of the pelvis. The meso-appendix, which may or may not be a misnomer, is a triangular fold with its right fold of peritoneum going to the cecum and its left fold going to the under side of the mesentery of the terminal ileum. The appendical artery is the only important structure in this fold. In other words, the meso-appendix comes off the junction of the cecum and mesentery to the ileum. On top of the ileum there is usually another fold of peritoneum running to the inner, upper surface of the cecum. This fold has a blood vessel usually surrounded by

*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.

a little fat at both its ileac and cecal ends. If this fold has a name I have not found it, and for the purposes of this paper I shall call it the anterior ileocecal fold. The ileum enters the cecum normally on its inner surface and, roughly, in a right angle position. The appendix leaves the cecum at its lower end and at the same angle.

The thesis which we present here as an established clinical fact is that any factor or combination of factors which alters the normal anatomy as described above can and does cause right-sided pain. The fact that there may be and probably are great anatomic errors here which do not cause pain must be recognized. In fact, the great majority of these conditions are congenital and no pain appears for a long time in spite of the existing situation. Our youngest surgical patient was nine years of age and the oldest fifty-six, with the majority between eighteen and thirty years of age. These people had no pain until these ages were reached. We have tried to determine the factors which eventually brought on the clinical picture but with no success. We believe pain in these cases to be entirely the result of tension. Whether tension previously painless becomes painful, or whether tension does not exist from the beginning in spite of these anomalies and becomes painful only after the tension occurs, we do not know.

Let us consider the clinical picture of patients of this type. In the first place they complain over a period of time, many years in some cases, of pain in the right lower quadrant. They have generally been told that they have appendicitis. The appendix may or may not have been removed. At first their pain comes in attacks of a few hours to a day or two. It usually is not severe but is a persistent, annoying ache. As time goes on the attacks become more frequent and last longer but the pain itself does not as a rule become more severe. In many cases it eventually becomes more or less continuous. One woman upon whom I operated claimed she had not been free of pain in nineteen years. These individuals like many other people may have had an acute attack of appendicitis with removal. If so, they may or may not have been relieved of the pain of which they complained before the acute attacks were suffered. As a rule the pain is made worse by physical effort and it is always improved by lying down. The pain has no relationship to menstrual periods, urinary function, eating, bowel movements, or other abdominal or pelvic functions. Nausea is not commonly connected with it but a loss of appetite, while the pain is present, is encountered in possibly forty per cent of the cases. When the pain is more acute or one of the attacks takes place, appendicitis is of course suspected first. A rise in the white blood cell count is found in a large proportion of cases but the differential count does not show a poly increase, a shift, or any evidence of toxic white cells. Tenderness over the appendix is constant, and tenderness high up on the right side on rectal examination is fairly constant. The tenderness both abdominally and rectally, however, is more diffuse than in acute appendicitis. In other words, no single tender spot is found. Frequently, particularly on rectal examination, a diffuse tenderness over what appears to be a boggy mass (cecum) is noted. As the attack progresses, successive white counts show no increase in evidence of toxic pathology and in fact tend to show a gradual lowering of the total white count. Rebound tenderness can be elicited in the more severe cases with a little imagination, but in no way resembles the definite type found in the local peritonitis cases. To sum up this type of case, it is or has been continually suspected of being acute appendicitis until conscientious clinicians have given up the idea entirely, but the patient still hurts, intermittently or continuously.

Many of these patients are completely discouraged for widely different reasons. Those in the first group have had their symptoms diagnosed as appendicitis, had their appendix removed, and still hurt. Those in the second group have been carefully and exhaustively studied by excellent clinicians and told that management aside from surgery was their only hope. In spite of careful cooperation they still hurt. Many patients of both groups have done nothing about it for years following their previous experiences with the medical profession. Because excellent men have impressed them with the fact that surgery will not improve them or will make them worse they are difficult to convince that surgery will be beneficial. Discouragement, however, eventually brings them to it.

The diagnosis which will warrant surgery is the important thing now. I am fully aware that the foregoing clinical picture is not a scientific masterpiece of a single clinical entity. That is why I call it this class of case. However, assuming we have a patient who has been exhaustively diagnosed and must still be left in the general type of case described above, how much more must we do to warrant surgical interference? A barium enema must be given by a competent roentgenologist and the pain definitely located in the ileocecal region. X-ray technicians have described elsewhere how to identify a retrocecal appendix, a right-sided ptosis, an abnormal ileocecal regionship, and so forth. All we ask is that the roentgenologist definitely identify the pain as cecal or ileocecal; when he has done that, surgery is indicated. I am, of course, assuming that, without enumerating them, no

physical, pathologic, or mental contraindications are present. Many of these patients have previously been put down as neurotic, and in many cases the patient himself is convinced he is just that. Neurosis, however, is not a surgical contraindication in these cases in which the neurosis can be reasonably construed to be the result of the right-sided pain.

An incision about four inches long is made just to the right of the right rectus muscle, extending from the umbilicus downward. The muscle splitting appendectomy incision does not give adequate exposure. Any one, or any combination of the following situations, may be encountered:

1. A retrocecal appendix is very common and causes pain as an abdominal suspensory ligament. It is found all the way from submucous in position (cecum and ascending colon) to very tight adhesions to the posterior colon. More typically it is subserous throughout its length or any fraction of its length. It may extend a short way upward from the cecum or it may go to the under surface of the liver. It does two things which result in pain. It forms a relatively stiff ridge up the outer posterior side of the cecum and ascending colon, which interferes with that structure's normal changes in position and volume. More important than this, however, is that it acts as a ligament which does not permit the end of the cecum to drop with the rest of the colon when the patient is in the upright position. As a result, such downward motion of the cecum as can take place must be an inward, forward rolling rather than a direct descent. This creates an abnormal point of tension and torsion, and with it pain. It also alters the normal angle of entrance of the ileum into the colon.

In this situation the removal of the appendix carefully and completely corrects the right-sided pain. This may be done during an acute attack of appendicitis with no subsequent return of pain and is thus used as an argument for a "chronic appendicitis." In many of these cases the appendix is of the chronic obliterating type, which has been called appendicitis obliterans by both clinicians and pathologists. The clinical results which come from its removal, if no other distortion is present, are good in this retrocecal type and account for the cures resulting from the obliterating appendix. The cure, however, comes from the removal of an appendix acting as a ligament. The removal of an obliterating appendix which is not retrocecal and which is not inflamed will correct nothing, as we all know.

2. A second abnormal tension found in these cases comes from the posterior pelvic peritoneum and in the female from its extension onto the posterior wall of the broad ligament. These are the cases in which one is likely to get the rectal tenderness of a moderately acute appendicitis. With this tenderness on rectal examination there is frequently noted spongy, tender resistance on the right side which we soon recognize as a tender cecum. It is no lower down if the examination is made in the upright position than if the patient is prone.

In these cases, when the cecum is picked up by the fingers or a rubber tipped forceps, a fold of posterior peritoneum is immediately brought into tension and the cecum cannot be brought up above the pelvic brim. When this fold is cut across radically enough the cecum can be brought into a normal abdominal position at once. This cutting takes only a few seconds since there are no blood vessels involved as a rule, and the only care necessary is to see that larger vessels, nerves, or on rare occasions the ureter, are not adherent underneath. This leaves a large, square, denuded area on the posterior wall of the pelvis which cannot be peritonized. If it is closed over, in any way I have figured out at least, it leaves the same tension and disadvantage of the original condition. The cecum which stays normally in the abdomen following this procedure does not become adherent. The cecum which is ptosed and would drop back and become adherent is considered later.

An immediate objection that these posterior pelvic folds will appear on any cecum when picked up will be brought forward legitimately. If there is no tension on minor motion, and if they do not interfere with the cecum being retained as an abdominal organ, we do not consider them important.

3. Another condition noted is the short anterior ileocecal fold. Just how important this is, I confess I do not know, but its correction is necessary to leave the ileocecal region in what we consider a normal position and relationship. This fold as described above runs from the antimesenteric side of the terminal ileum to the cecum. It has a small amount of fat at both its cecal and ileac ends and between it is almost transparent. It holds the terminal ileum parallel to the inner side of the cecum even when tension is put on both organs. When this tension is applied this center becomes more evident and can be cut. What appears at first as a quarter inch cut may be an inch and a half or more when the tension is continued until the ileocecal junction is reached. Both ends require ligation since there is almost always a small bleeder in either end. The ileum now goes straight into the cecum at a right angle and the proximal end of the fold which originally was against the cecum may now be as much as four inches up the ileum. Oc-

casionally there will be a little additional bleeding along the surface of the ileum which is easily controlled by a Lembert type of stitch along the cut line.

4. A fourth and very important factor in this consideration is right-sided ptosis (cecum and ascending colon). Here again we have a condition which is not always important in correcting our right-sided pain, but we believe we have determined when it is important. If it does not show the red lines of force (Coffey) rather prominently, we do not consider it at all. If it does show them, we consider it very important under the circumstances described below.

When associated with a retrocecal appendix, it frequently becomes greatly exaggerated as soon as the abnormal suspensory function of the appendix is lost by removal. In this case a right-sided suspension is necessary. In some cases the right-sided ptosis is evidently not a part of a general ptosis and the colon drags on the ileum. This situation is easily picked up by mechanically exaggerating the ptosis and locating the tension. This may be completely isolated from any of the other conditions described here and the sole cause of the pain. A suspension is done in such instances. In other patients the ptosis is associated with the pelvic peritoneal bands described above, and if a suspension is not done the posterior cecum becomes adherent to the denuded posterior pelvic bands (after the bands have been cut) and not only fails to correct the original condition but makes it worse. The same indication is present if, because of previous surgery or inflammatory process, the cecum has had to be freed from pelvic adhesions. The more experienced we become in this problem the more suspensions we do when correcting these other errors.

If the suspension is done properly, it can do no harm, and as we have mentioned before, when several factors are present, we do not pretend to know in each case which are the more important from the pain standpoint. We use the Coffey purse string type suspension as a rule.

Another condition which varies much in its details pulls the terminal ileum down without any tension on the cecum. This, of course, seriously alters the ileocecal relationship and in many cases causes pain. Some of these cases are evidently congenital bands but many appear to be the result of previous inflammation. The bands of tension previously described to the cecum may run up the lower surface of the mesentery of the terminal ileum. This may be present with bands to the cecum also, or may be present with an uninvolved cecum. Frequently the roentgenologist can pick up this condition with the terminal ileum pulled into the pelvis. Sometimes the downward pulling is directly the result of postinflammation or postoperative pelvic adhesions. If these are far enough up from the cecum (approximately eight inches) they do not produce the type of clinical picture we are considering. If they are from two to five inches from the cecum, they consistently cause this type of pain. Occasionally we find a terminal ileum which appears to have been rolled downward over its mesentery and placed in position. As it is separated and rolled upward again from its mesenteric attachment, fine hair-like fibers appear and break. These look a great deal like the adhesions seen in a terminal or segmental ileitis. In fact, in several cases I was suspicious that this condition might be starting in spite of immediate relief from the right-sided pain. Time disproved this, however. In all these cases such surgery as is necessary to bring the ileum back into a normal mobile condition is easily done.

The conditions previously described are found in every conceivable combination and many times with less frequent abnormal attachments which we do not have time to relate here. We do not claim that any of them may not be present without pain. In fact it is possible that all of them might be present without pain. We only claim that in the type of clinical case we described here one or more of these conditions are present. In this type of case, when these conditions are corrected surgically, the pain is cured.

Our most common age group in these cases has been from eighteen to thirty-five years, and there have been many more cases among women than men. We have had several patients whose pain did not start until they were past fifty, although the cause was evidently congenital. We have been careful in choosing the cases for surgery and believe that is the most important factor. The surgery is simple and safe, and due to this results will suffer because of poorly chosen cases.

If a diagnosis of this type of case is accepted by the type of surgeon who does too many appendectomies, without adequate preliminary diagnostic work, many failures will result. On the other hand, those people who have been too violently opposed to surgery in these cases will pass up many possibilities of excellent results by demanding a too definite preoperative diagnosis. With a clear picture of these conditions and their possibilities and increasing experience with them, both extremes will eventually converge onto a satisfactory middle course.

Pain usually disappears in these cases as soon as the postoperative pain is gone. It is invariably gone as soon as the postoperative induration has disappeared. Occasionally in those cases where a

right-sided suspension has been done, a month or more of adjustment may be necessary before final results are obtained. Proper dietary and medical control should be described to anyone who has undergone surgery, and particularly in these cases because so many of the patients have had their trouble long enough to become neurotic.

The time allotted for this discussion will not permit detailed statistics. We shall state, however, that of the last one hundred patients upon whom surgery was performed there was one partial failure and even that patient improved enough to be appreciative. These patients had had right-sided pain from three months to nineteen years. All were improved or relieved by bed rest; all considered the pain severe enough to undergo surgery; all had other lesions eliminated diagnostically; and all were followed from three months to three and one-half years postoperatively. Older cases have been followed fifteen years, and the very few cases which were unsuccessful earlier were due to improper selection.

CONCLUSIONS

1. Right-sided pain (as described here) may be a definite surgical entity.
2. The type of case is set forth which we believe can be corrected surgically.
3. The surgical findings and procedures are related.
4. A warning is offered that results will be dependent on careful selection of cases and that surgery is not a panacea for all pain in the right lower quadrant.

Discussion

Dr. Harold W. Morgan, Mason City: In discussing this paper, I wish to call attention to an adjunct to the diagnosis of the anatomic condition which we have called a mechanical appendix, or better a mechanical configuration of the cecum, because the appendix is involved only by virtue of its position. By means of barium with visualization of the terminal ileum, we can state that the configuration described is present in a high percentage of cases. It will be noted that the terminal ileum takes a course down around the lower end of the cecum in intimate contact with it and inseparable from it for a distance of six inches in the average case. This finding is not uncommon in normal individuals with no complaints referable to the right lower quadrant. But with the patient complaining of chronic low grade pain or discomfort localized in this region which is relieved by lying down, and with an x-ray picture as I have described to you, you can be very certain of the diagnosis. Practically all of these patients are relieved by operation if the adhesive bands are removed. The removal of only the appendix will have no effect on the pain.

In these cases the appendix is almost always retrocecal and the method outlined can be used to determine the localization of the appendix without its actual visualization. The examination can be helpful in acute cases in localizing the area of greatest tenderness.

THE EARLY DIAGNOSIS AND TREATMENT OF TUBERCULOSIS*

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I chose this subject because it is very important in time of war. We saw a definite increase in tuberculosis after the last war. Through the National and State Tuberculosis Associations, we have gone a long way in the control of this disease. We could do still better if every physician in the state were interested in tuberculosis, were tuberculosis-minded, as we might say, and took an active part in the early diagnosis and control of this dreaded disease.

Iowa has the lowest death rate of any state in the Union from tuberculosis. This is due to the fine work of the Iowa Tuberculosis Association in educating the public and in making group examinations.

In 1900 tuberculosis caused more deaths than any other disease. In 1940 it was eighth as the cause of death. It still, however, is the cause of one-seventh of all deaths in the country and one-third of all deaths in the productive age from fifteen to forty-five. This disease, therefore, is not under control. I feel that the National Tuberculosis Association has accomplished a great deal but could do better if every physician were interested in the control of the disease and took an active part in the campaign for its control.

In no disease is early diagnosis more important, nor probably more difficult, than in tuberculosis. It is the best means of controlling this disease. An early diagnosis protects the patient, the relatives, friends, and all contacts, while failure to make such a diagnosis often leads to serious consequences.

To diagnose tuberculosis, we do not need to be specialists. I have, in fact, tried to write this paper from the standpoint of a general practitioner. To make an early diagnosis in the average case of tuberculosis, we need to be interested in the disease and the patient and to make a complete examination of each suspected case. Roentgenograms have been a great aid in the early diagnosis of this disease. Most authorities state that only about 27 per cent of the early cases can be diagnosed by the physical findings alone, while about 99 per cent can be diagnosed early by x-ray examinations. This leads one to feel that a thorough examination

*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.

is not as important as we formerly thought. However, I believe that we should not depend on the roentgenogram alone; a complete history and thorough general examination are still the important steps leading to a diagnosis.

There is nothing new in our methods of general examination for tuberculosis. First and most essential is a careful history of symptoms and which symptoms brought the patient to the physician. A careful evaluation of these items often leads to a diagnosis.

What symptoms do usually bring a tuberculous patient to the physician? Those most commonly mentioned, in the order named, are: Cough, 87 per cent; loss of strength, 83 per cent; loss of weight, 74 per cent; loss of appetite, 53 per cent; indefinite pains and pleurisy, 48 per cent; followed by low grade fever, hemorrhage, nervous instability, night sweats, hoarseness, and dyspnea. Hemoptysis and pleurisy with effusion are found in only a small number of cases. We should recognize these signs early. The patient often sees the physician early enough but the symptoms are not recognized. No one patient has all the symptoms named but will have some of the common signs.

Dr. Pottenger has a fine etiologic grouping of symptoms: First, those due to toxemia—malaise, loss of endurance, loss of strength; second, symptoms due to reflex cause—hoarseness, cough; and third, symptoms due to the tuberculous process itself—frequent colds, spitting of blood, pleurisy, sputum.

By questioning the patient carefully, we often find the disease has been developing for a long period of time, with loss of weight, loss of strength, loss of appetite, and cough apparent for a period of months or even years. We may often find the patient has been subject to attacks of colds, cough, and pleurisy.

The family history of tuberculosis is not considered as important as formerly. We often see a case of pulmonary tuberculosis in a person whose family is free from the disease, and then there are instances in which all other members of the family remain free from tuberculosis for many years after one member of the family has had the disease in an active stage. Do not, however, overlook this phase of the examination. The family history, if carefully taken, often aids in making the final diagnosis. Frequently a case of chronic bronchitis in the family proves to be a case of unrecognized tuberculosis. This is often proved in tuberculosis surveys.

The use of cigarettes often leads to symptoms simulating early tuberculosis. Also, conditions such as silicosis and anthracosis may simulate early tuberculosis.

If a patient appears with chronic cough, loss of weight, weakness, loss of appetite, and an afternoon temperature of 99 or 99.2 degrees, we immediately suspect tuberculosis, especially if a careful examination fails to reveal any other cause for this temperature. We should at once obtain a temperature and pulse chart over a period of several days.

A pulse rate of 100 or over with a low grade afternoon temperature is of utmost diagnostic value. The pulse rate increase is more indicative of a tuberculosis toxemia than a slight rise in temperature. Nervousness, mental reactions, and endocrine disorders may cause an increase in the pulse rate. However, an increased pulse rate associated with a low grade temperature has great diagnostic value. If the temperature and increased pulse rate are associated with persistent cough, weakness, loss of weight and strength, we can almost immediately make a diagnosis of tuberculosis.

Early tuberculosis is usually not associated with anemia but moderately advanced tuberculosis is always associated with anemia, weakness, and toxemia.

All patients with suspected cases should have a careful examination with the chest well exposed. This examination includes inspection, palpation, percussion, and auscultation. This phase of the examination is often neglected, due to the use of roentgen rays, I think, and our dependence on the roentgenogram. The amount of information obtained by this examination depends on the skill of the examiner and the thoroughness with which he performs his work.

Inspection first gives us a general opinion of the chest as a whole. We often find unequal expansion of the two sides due to involvement of one side with consequent muscle spasm, fixation, or to an old lesion with fibrosis of the lungs and pleura and atrophy of the muscles of the chest wall. The apex beat may be displaced either to the right or the left. If it is to the left, it may indicate retraction due to fibrosis or atelectasis of the left lung, parenchyma with compensatory emphysema in the contralateral lung, or a pleural effusion or a pneumothorax of the right lung. If the apex is pushed to the right, the pathology is, of course, the opposite. In early tuberculosis inspection usually reveals very little.

Palpation is also often neglected. It should be done carefully, one hand on the front of the chest, the other on the back with fingers in the interspaces; have the patient say 1-2-3 or 99, and note the increase, decrease, or normal fremitus. This

is difficult in muscular or obese patients. In early cases few changes are noted.

Palpation of the muscles of the shoulder girdle and the intercostal muscles will frequently bring out muscle spasm on one or both sides. This indicates disease in the underlying lung. It bears the same relation to lung disease as a rigid abdominal right rectus muscle does to acute appendicitis. In skilful hands this is often a valuable diagnostic aid.

In early cases percussion is also of very little or no value. Unilateral apical dullness is one of the most frequent signs of pulmonary tuberculosis. It is generally most distinct in the highest intercostal spaces anteriorly, but sometimes in early stages is found only in the infraclavicular fossa or more often at the back of the supraclavicular fossa. Dullness increases as the disease progresses. Careful percussion over the clavicle often brings out a definite dullness on one side or the other. The entire chest should be carefully percussed, comparing one side with the other and one area with the other. We can often outline some area of dullness in a fairly well developed case.

I shall not devote too much time to the important procedure of auscultation. It usually yields no signs which are definitely diagnostic of tuberculosis, yet the extent of involvement of one or both lungs can be more definitely outlined by auscultation than by any other method of physical diagnosis.

The earliest physical sign of clinically active tuberculosis is the presence of fine moist râles usually heard in a small area in the upper one-third of either lung. These moist râles denote active disease process and are the most important factor in the early detection of tuberculosis. The râles are best elicited by having the patient cough at the end of expiration, the cough to be followed by deep inspiration. The importance of the moist râles in the upper one-third or either lung should not be underestimated. In all extensive lesions the râles are heard on ordinary deep breathing. Bronchial and amphoric breathing denote extensive infiltration and cavitation, which, of course, are present only in the more advanced cases.

Today the mainstay in the early diagnosis of tuberculosis is the use of roentgen rays and the fluoroscope. We can demonstrate the early lesions long before the physical signs are definitely present or the symptoms are well developed. As I stated previously, the roentgenogram in skilful hands will make an early diagnosis in about 99 per cent of the cases, especially if combined with the tuberculin testing of the patient. Every patient with a suspected case should have a roentgenogram taken and a fluoroscopic examination made as soon as possible. The fluoroscope reveals the gross changes, shows the extent of movement of the diaphragm, the chest expansion, and the extent to which the apices are aerated. It shows adhesions within the chest and sometimes shows the heart pulled or pushed either to the right or to the left.

The roentgenogram shows the fine detail and the beginning peribronchial thickening and the early changes so important in an early diagnosis. It gives a detailed picture of the amount of involvement and completes our examination except for the laboratory findings. In more advanced cases we see the cavities clearly outlined in one apex or the other, or both. In miliary tuberculosis we sometimes see small areas through the entire lung.

A positive sputum reaction is still the only direct and specific evidence of active tuberculosis. A specimen of sputum from any patient with a suspected tuberculosis should be examined. If one test is negative, it should be repeated daily for several days or weeks. Repeated examinations may still be negative and it may be necessary to use guinea pig inoculation for a final diagnosis. With the laboratory facilities at our command today, the essential sputum examination should be used in all suspected cases. Do not wait for a positive sputum test to make a definite diagnosis, however, since early diagnosis is a most important step in early treatment. Early tuberculosis often does not have a positive sputum reaction. A positive test denotes definitely active tuberculosis.

The sedimentation rate is not a specific test for tuberculosis, but it does determine the presence of an active infection. It should be used in diagnosis and during the course of treatment to determine the progress of the infection.

Another test which will give a great deal of information is the Schilling white blood cell count. This test is also not specific for tuberculosis, but it will often give information as to the course of the disease. Leukocytosis is a sign of activity. An increase in young immature myelocytes is an unfavorable sign indicating increased infection. If the increase in white cells is mostly lymphocytes, this is a sign of healing. The erythrocyte count, red blood cell count, should always be a part of the examination. One may find secondary anemia, pernicious anemia, or agranulocytosis. One should also determine a hemoglobin and color index. A blood culture may also be made for blood stream infection.

Since the tuberculin test was first introduced as a diagnostic aid by von Pirquet, it has been used almost universally. The Mantoux method of intradermal injection is the best method today. We may also use the skin patch test. The tuberculin test is the most useful in case finding. A negative

reaction denotes the absence of a tuberculous infection. A positive test indicates the presence of an infection but not necessarily an active infection. Negative tests are most important, therefore, since they eliminate tuberculosis as a diagnosis except in a few isolated cases where the infection is well walled off. This test is not indicated as a routine measure but should be used in questionable cases and may aid greatly. The principal use is in large tuberculosis surveys. All positive reactors should then have x-ray and fluoroscopic examinations.

Once a diagnosis is definitely established, the method of treatment must be considered. It must depend somewhat on the condition of the patient, his family ties, his need for financial support, and the family's general surroundings and the general hygienic condition. To be well treated, the patient must be comfortable, satisfied, and without family or financial worries. The patient must be made to understand his condition. He must know that the treatment will necessarily cover a long period of time if he is to be cured. Once we have a mutual understanding of just what is necessary for successful treatment of the disease, we have gone a long way in successfully treating the patient. We should never make light of the disease, even in its early stages. One cannot be assured that any patient is cured until two to three years have elapsed after the symptoms of the disease have disappeared. The fundamental factors in treatment are rest, diet, suitable hygienic surroundings, fresh air, and collapse therapy. All these must be carried out under strict, intelligent, medical supervision. The patient must have absolute bed rest until all clinical evidence of the disease has disappeared; then and only then is he allowed up. He should be permitted to go about the house very gradually, and all developments should be carefully watched. Then modified exercise is begun and gradually increased until the patient can be up and about for six to eight hours per day without symptoms. This, of course, takes time and patience and the patient must understand this. The patient should have a well lighted and well ventilated room. The diet must be a good, appetizing, high caloric type, 2,500 to 3,500 calories, but I do not believe in forced feeding.

Despite the bed rest, high caloric diet, good hygienic conditions and good care, a certain percentage of tuberculous patients fail to respond. Notwithstanding gain in weight and the disappearance of clinical symptoms, many of these patients continue to have a positive sputum reaction and have frequent, recurrent, acute exacerbations with spread of the disease. These patients are often called "good chronics" and their outlook was formerly very discouraging. Such cases led to the development of collapse therapy. It has been in the last twenty-five years that this procedure has been recognized as a great step forward in the treatment of the disease. It is not used enough today, and most especially it is not used early enough. Early diagnosis followed by early collapse in those cases requiring this type of therapy is the most important step in the cure of the patient. Collapse should be started before the disease has progressed too far and the adhesions have become too well developed.

Today no physician should consider the diagnosis of early tuberculosis without the use of roentgen rays as an integral part of a complete examination. The use of the x-ray unit has made collapse therapy much simpler; we can visualize just what we are doing, adhesions can be seen and often broken down. Formerly, adhesions often led to failure in this type of therapy but today at least minor adhesions can be broken down and good results are therefore obtainable in cases where we formerly failed. Collapse therapy has improved as the use of x-ray and fluoroscopic examinations has increased.

Pneumothorax closes the cavities in the lung, gives the lung rest, and therefore aids in the healing. It often gives a negative sputum reaction in instances when long periods of rest have failed. By closing the cavities and giving a negative sputum reaction, the patient gradually improves, symptoms disappear, and the general condition of the patient improves.

Collapse therapy should be attempted, for the first time at least, in a hospital or sanatorium, but the treatment may be repeated in the office under careful supervision. The patient must be carefully checked by the use of roentgen rays and the fluoroscope. I must repeat again that collapse therapy should be started early in any patient showing signs of beginning cavitation or in any patient who fails to respond to bed rest and general hygienic treatment. Early treatment prevents adhesions, collapses the cavities, and arrests the cause of the disease. Early diagnosis and early collapse therapy can do much in saving the lives of any tuberculous patient.

In conclusion, I wish to say again that the physician does not need to be a specialist to make a diagnosis or to treat early tuberculosis. He must know the old principles of diagnosis. He must be tuberculosis-minded and must consider the possibility of the disease in all patients in whom symptoms are vague and indefinite. He must use roentgen rays, the fluoroscope, and the laboratory to complete his examination.

I must say that if we wish to eradicate tuberculosis we must prevent it. At present the medi-

cal profession has at its command the knowledge and scientific methods with which the prevention and complete control of tuberculosis is possible, but we are not applying all our knowledge to this end. If a mass survey by the National Tuberculosis Association were carried out and the medical profession took an active part or assumed leadership in such a survey, tuberculosis could and would become, within a generation, a disease of the past.

Discussion

Dr. John C. Parsons, Des Moines: In the question of tuberculosis, we are up against a couple of paradoxes in that in early tuberculosis there are no symptoms, as Dr. Nelson has mentioned to you. Early symptoms of tuberculosis are all too often symptoms of a moderate to far advanced disease.

When a patient comes into your office and has a cough and loss of weight, it is dollars to doughnuts he already has far advanced tuberculosis. In that case Dr. Nelson was talking, really, not about early tuberculosis but far advanced tuberculosis. The people with early tuberculosis do not come into your office. You have to go out and get them if you are going to find early tuberculosis. These folks have no symptoms whatsoever. You cannot expect a man to come into your office and say, "Doc, I'm feeling swell; I was feeling so darned good I thought I would have an examination because I thought I had tuberculosis." That is a little too much to expect. The only way you can find tuberculosis is to go out looking for it, and the only place to look for it is where you know it already is. One place to find it is a family in which grandpa or grandma lives with the family, and has a chronic winter cough or what they call "asthma" or chronic bronchitis. All too often these old people with this chronic cough have chronic fibroid tuberculosis. They get along beautifully with their tuberculosis. They live usually until they are ninety. Some of them have to be killed by meeting a truck at an intersection. They may not die from their tuberculosis, but they infect all the kids and the grandchildren in the family. Then you start finding some tuberculosis in that family.

If you have, then, a family in which you have found a case of tuberculosis, it rests with the doctor to see that there is no more tuberculosis in that family. When a case has been found, it is really the doctor's responsibility to tell that family that they should all be examined. If you are looking for early tuberculosis, there is no need of going over their chests. The thing to do is to send them in for an x-ray examination.

I think the time is coming when we are going to consider a chest roentgenogram just as routine as a urinalysis. The time is coming when it will be routine in all of our hospitals; when a patient enters a hospital, it does not make any difference whether it is for a routine checkup or whether he is coming in for acute appendicitis, a chest film will be made on him just as well as a blood count or a urinalysis. That has been done in many cases and the results are astounding.

One does not realize that in the general hospitals throughout the country, pulmonary tuberculosis runs about 1.0 to 1.5 per cent of all the cases which come into that hospital. Someone comes in for an appendectomy. In four or five months they have found that the little cold he had, which perhaps altered the idea about an anesthetic at the time, turns out to be a far advanced tuberculosis. Many a person has had a major operative procedure and has been found a few weeks to a few months later to have a tuberculosis which could not possibly have come on in that short time. It was present at the time of the operation.

I do feel that all of our educational campaigns on the early diagnosis of tuberculosis is getting results, but I do not feel that it is getting results through the public. I feel that educating the public so far has proved to be a dud. The only place that our education on early tuberculosis is counting at all is in the medical profession. We know, for instance here in Des Moines, that we cannot say any cases have been discovered because we have educated the public.

The early cases which have been picked up are because we have found active cases and then sent the visiting nurses around to herd up the family and all of the friends, relatives, and close associates, and get them to some place where they can be examined.

The early cases of tuberculosis must be diagnosed by roentgenograms because we do not find anything in the chests of these patients and they do not have any symptoms.

I think the early diagnosis of tuberculosis depends upon examining the associates of the patients with already known cases. The patients with the known cases do not necessarily have to be still alive. A certain number of them are dead, but they have associated during life with their families and have infected them. Tuberculosis is not a fast thing, you know, it takes two to three years, as a general rule. J. Arthur Myers says that an average period of two years and four months elapses before anything appears in the way of symptomatology. It takes about that length of time, understand, after the thing has started, before the first symptoms appear. Therefore, in that interval you have to depend on extra help, and the roentgenogram is by far the most important.

If you are looking for tuberculosis, get an x-ray examination of the individual; it will help more than any other one thing which you can do. If the x-ray examination is not done, you are omitting probably the most important point in getting an early diagnosis of the disease.

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THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

CARCINOMA OF THE TRANSVERSE COLON IN A BOY OF SIXTEEN

MATTHEW J. MOES, M.D., Dubuque, and
MARTIN E. DITTMER, M.D., Colesburg

In the past carcinoma was generally considered a disease of middle and late life. With the fuller utilization of newer methods of diagnosis more malignant tumors are being discovered in younger individuals. However, carcinoma of the transverse colon in a person sixteen years of age or under is exceedingly rare, and the following case is reported for that reason.

CASE REPORT

Chief Complaint: The patient, a white boy 16 years of age, was first admitted to the Finley Hospital May 2, 1943, because of "hemorrhage from the bowel."

Family History: The patient's mother had had an operation for appendicitis and for some uterine condition. Three sisters were living and well. An aunt had had cancer of the breast; one uncle was living and well.

Past History: The patient had had measles, whooping cough, mumps, and chickenpox, but otherwise had always been well.

Present Illness: For about one year the patient had had attacks of abdominal cramps accompanied by the desire to defecate. At times no stool resulted but generally there were one or two bowel movements daily. At home he was unable to see the stools but when at school he never noted blood or mucus in them. Two nights before admission, after a day when he had felt better than usual, the patient was awakened from sleep because of nausea; he did not vomit. He went to the toilet and had a loose, watery-feeling bowel movement. At one o'clock the same night he had upper abdominal cramps but no further bowel movements. The next morning he noticed bright blood in the stool, but during the day two other stools were free of blood. The morning of admission he passed considerable blood and was sent to the hospital.

Physical Examination: The patient was an anxious appearing boy of sixteen who seemed well nourished but extremely pale; he complained of thirst, evidently as the result of the hemorrhages. He was in no pain but felt weak. The general examination of the head, eyes, ears, nose, throat and neck was negative. The chest expansion was good and equal on both sides. The lungs were negative to percussion and auscultation. The heart was normal in size to percussion and the heart tones, while soft, seemed normal. No mass or points of tenderness could be felt in the abdomen. The genitalia, extremities, and nervous system were negative. The patient's temperature was 99 degrees; the pulse was 90; and the respirations were 20 per minute. A blood examination revealed a white blood cell count of 12,800, and a red blood count of 2,660,000; hemoglobin, 43 Sahli units. A stool examination showed a gross hemorrhage.

Provisional Diagnosis: Hemorrhage from the bowel of unknown etiology and secondary anemia.



Fig. 1. Roentgenogram showing defect involving the proximal portion of the transverse colon.

Course in Hospital: Since the patient was too ill for x-ray studies, the immediate concerns were stopping the hemorrhage and overcoming the anemia. The diet was restricted, an ice bag was applied to the abdomen, and two blood transfusions as well as intravenous 5 per cent glucose in normal salt solution were administered. The gross blood in the stools disappeared on the second day and he seemed better in every way. After twelve days he was sent home for further convalescence. Two weeks later x-ray studies were made and following is the report:

Fluoroscopic examination of the chest and heart was negative.

Esophageal function was normal. The stomach and duodenal cap outlined smoothly. There was normal motility of the stomach, cap, and small bowel. The barium was uniformly distributed throughout the colon in six hours. Examination of the colon by barium enema demonstrated a fill-

ing defect nearly two inches long in the proximal portion of the transverse colon just beyond the hepatic flexure. The defect was symmetrical and rather smooth, leaving a central canal about 1.5 centimeters across. The colon was otherwise normal.

Films taken after filling and after evacuation also demonstrated the above defect.

X-ray Interpretation (By Dr. Wayne A. Johnston, roentgenologist): "Annular tumor of the proximal portion of the transverse colon which in my opinion is malignant."

Readmission: The patient was readmitted to the hospital July 3, 1943, and the next day the operation was performed. Following are the operative notes:

A right rectus incision was made and a tumor mass involving the proximal part of the transverse colon, beginning at the hepatic flexure, was located. The liver was free from metastases and no enlarged lymph nodes could be found. A resection of the tumor was done using Lahey's modification of the Mikulicz operation. The involved portion of the colon was freed, bleeding controlled, and clamps applied; and the mass was removed with a cautery. Interrupted linen sutures were used to approximate the two ends of the colon along the line where the clamps were later to be applied. The clamps were left in position. The peritoneum and the remainder of the abdominal wall were closed in layers. The patient left the operating table in good condition.

Pathologic Report: Grossly, the specimen was 10 centimeters of colon with a thickened, hard wall. A superficial ulcer involved almost the entire mucosa. The wall was thickened by hard, silvery gray, translucent tissue which extended to the serosa. One nodule was found in the serosal fat.

Microscopically, the sections of the wall and of the nodule in the serosal fat showed masses of columnar epithelial cells tending to form glands in some areas but in others forming strands and masses of cells rich in chromatin and with numerous mitotic figures. The stroma of connective tissue and blood vessels was only moderate in amount and was infiltrated with numerous polymorphonuclear leukocytes and old blood pigment as well as recent hemorrhages.

Anatomic Diagnosis: Adenocarcinoma of the transverse colon; grade 4 malignancy; infected; extension to the serosal fat.

Subsequent Course: The immediate postoperative course was stormy but gradually the patient gained in strength. The anemia was combatted by transfusions and iron therapy. Ten weeks after the first operation the colostomy was closed and at that time there was no evidence of recurrence or metastasis. He was discharged from the hospital twelve weeks after the original operation, apparently cured, although the parents were warned as to the possibility of recurrence.

GENERAL DISCUSSION

The relative distribution of carcinoma of both the colon and rectum is shown in the following table taken from Raiford[1] and based upon the records of Johns Hopkins Hospital between 1889 and 1932. It is typical of most reported series in adults but does not include cases of patients under twenty years of age.

TABLE I

Distribution of 192 Carcinomas of the Colon

Location	Number of Cases	Percentage
Cecum and ascending colon	67	35.3
Hepatic flexure	18	9.5
Transverse colon	14	7.4
Splenic flexure	11	5.7
Descending colon and sigmoid	72	37.4
Location undetermined	10	4.7

In this, as well as in most reported series, the majority of patients are between forty and seventy years of age, and carcinoma of the colon in children has appeared as reports of single cases. Ewing[2] states that "Louart collected 61 cases of carcinoma of large intestine between the ages of 20 and 30 years. The disease is rather frequently observed at much earlier periods, in the cecum at 12 years (Nothnagel), in the rectum at 11 to 17 years (Czerny, Stern, Schoning), in the sigmoid at 12 years (Garrad), in the colon at 3 years (Clair). Phifer collected 23 cases of carcinoma of sigmoid or rectum in children under 16 years. Wainwright found records of 6 cases of intestinal cancer above the sigmoid in children under 16 and added one case of his own."

According to Pfeiffer and Wood,[3] Ewing also stated in a personal communication, "Cancer of the colon in a child of 8 years is very rare. I have personally never seen the disease at that age. In my book, *Neoplastic Diseases*, third edition, one case is recorded at 3 years. Twenty-nine under 16 years of age." We have been unable to find such a quotation but assume Ewing was referring to the statistics of Phifer and Wainwright as cited in the previous paragraph. These include the lower sigmoid and rectum where the tumors even in the young are more common, as well as those above the sigmoid. The principal interest has been in the incidence of the latter group. There has also been some discussion as to whether the upper age level for childhood should be fifteen or sixteen, and we have taken Wainwright's[4] figure of sixteen as the proper one. In Table II we have combined the statistics of Wainwright, Walker and Daly,[5] Pennell and Martin,[6] and have also added our case

which makes a total of twenty-five cases in the last sixty years.

TABLE II

Carcinoma of Colon Above the Sigmoid in Children 16 or Under

Author	Date	Sex	Age	Location
Spanton	1878	F	12	Cecum
Maydl	1883	F	12	Cecum
Maydl	1883	M	13	Cecum
Burger	1893	M	15	Ascending colon
Mayo-Robeson	1895	F	14	Ascending colon
Petroff	1897	M	16	Hepatic flexure
Nothnagel	1898	M	12	Cecum
Ruczynski	1904	M	13	Splenic flexure
Muralt	1913	M	13	Ascending colon
Wainwright	1925	F	11	Splenic flexure
Chajutin	1929	F	14	Cecum
Rocher and Guerin	1931	M	11	Splenic flexure
Walker-Daly	1933	M	5	Cecum
Pouzet	1933	M	14	Ascending colon
Wakeley	1933	M	16	Ascending colon
Pfeiffer and Wood	1935	M	7	Transverse colon
Ogilvie	1935-6	M	13	Cecum
Warthen	1937	F	14	Transverse colon
Webster	1938	F	9 yr. 11 mo.	Splenic flexure
MacGuire	1939	M	15	Transverse colon
Rawls	1940	F	12½	Splenic flexure
Plehn (cited by Rawls)	1940	F	9	Cecum
Pennell and Martin	1941	M	13½	Ascending colon
Moes and Dittmer	1943	M	16	Transverse colon

The diagnosis of these neoplasms largely depends upon adequate x-ray studies. It is rare that a tumor causing symptoms escapes detection with barium enemas which are more accurate than the usual gastro-intestinal, roentgenographic examination. At times the barium enemas should be followed by injection of air. The demonstration of a constricting lesion in the colon is diagnostic.

The treatment of these tumors in children is based upon the same principles which govern their treatment in adults. These include preoperative cleansing and decompression of the bowel by medical and surgical means; the employment of a high caloric, nonresidue diet with abundant fluids; and the resection and removal of the lymph nodes draining the area. When anemia is pronounced, blood transfusions should make up the loss of blood. Postoperatively, absolute rest of the bowel by abstinence of food for one week, the administration of opiates, and the control of distention are demanded. Fluids can be supplied by subcutaneous and intravenous infusions.

The prognosis is best when the lesion is diagnosed early and given the correct treatment. While carcinoma is likely to be more malignant in children, the time when operation is performed is probably more important with regard to the prognosis than the degree of malignancy. As judged by histologic methods, probably 35 per cent of the carcinomas of the transverse colon are cured if diagnosed while resectable as compared to 50 per cent of those in the sigmoid. The prognosis can be improved by earlier diagnosis. This demands that the possibility of carcinoma of the colon be considered in all patients, regardless of age, with unexplainable abdominal symptoms.

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POSTGRADUATE ASSEMBLY ON NUTRITION IN WARTIME

A Postgraduate Assembly on Nutrition in Wartime, sponsored by The Institute of Medicine of Chicago, will be held Wednesday and Thursday, November 17 and 18, 1943, in the Palmer House, Chicago, and will be devoted to phases of nutrition which are of particular interest at this time to practicing physicians, dentists, nutritionists, and dietitians. There will be no fees of any kind and all members of the above professions in Chicago and the midwest are invited to attend.

The program will include the following discussions: The Impact of the War on the Diet of the City and Rural Dweller, Frank L. Gunderson, Executive Secretary of the Food and Nutrition Board, National Research Council, and member of the Committee on Civilian Nutrition, War Food Administration; The State of Nutrition in Urban and Rural Populations as Reflected by Selective Service Rejections, Leonard G. Rowntree, Chief of the Medical Division, Selective Service System; Early Clinical Recognition of Nutritional Deficiencies, John B. Youmans, Vanderbilt University; Some Pathologic Aspects of Undernutrition, Paul R. Cannon, The University of Chicago; Laboratory Aids in the Evaluation of Nutritional Deficiencies, William A. Perlzweig, Duke University; Present Day Concepts of Nutritional Requirements, Lydia J. Roberts, The University of Chicago; The Role of Protein in the Diet, William C. Rose, University of Illinois; Food Proteins, Blood Proteins, and Disease Therapy, George H. Whipple, University of Rochester; The Role of Carbohydrate in the Diet, Samuel Soskin, Michael Reese Hospital, Chicago; The Use of Carbohydrate in the Treatment of Disease, Henry T. Ricketts, The University of Chicago; Some Obstacles in the Path Toward an Optimum Diet, Anton J. Carlson, The University of Chicago; Teeth as an Index of Nutrition, Julian D. Boyd, The State University of Iowa; Nutritional Requirements in Normal Pregnancy and Lactation, Icie Macy Hoobler, Children's Fund of Michigan; Overweight and Underweight, Edward H. Rynearson, Mayo Clinic; and Uses and Abuses of Vitamins, Morris Fishbein, Editor of The Journal of the American Medical Association.

The subjects of the six panel discussions, scheduled for the afternoon of the second day, are: Therapeutic Diets and Rationing; Current Practices in Infant Feeding; Parenteral Nutrition: Methods and Indications; The Proper Place of Accessory Vitamins in the Diet; Controversial Aspects of Diet in Diabetes; and Can Dental Caries in the Young and in Pregnant Women be Controlled by Diet?

A complete program and registration blank can be secured by addressing The Institute of Medicine of Chicago, 86 East Randolph Street, Chicago 1, Illinois.

State Department of Health

Nate L. Bierring

POLIOMYELITIS IN IOWA
Morbidity and Morbidity Rates for the 13-Year Period 1930-1942

The accompanying map shows the number of poliomyelitis (upper figure in county) as reported from all of the counties for the period 1930 to 1942. The lower figure in each county represents the average annual morbidity rate per 10,000 population. The legend and method of graphic presentation indicate counties which had the lowest as well as those with the highest morbidity rates. Unusually low rates probably reflect poor notification of cases.

RATES FOR CURRENT SEASON

Thus far in 1943 (through October 20), reported cases of poliomyelitis total 188 cases. Counties which in 1943 have had a morbidity rate from three to seven times the average annual (expected) rate, include the following: Cedar, Dubuque, Greene, Lee, Muscatine, Scott, Worth, and Wright.

NEW RULES AND REGULATIONS

The 1943 edition of *Rules and Regulations of the Iowa State Department of Health* is now on the press; a copy will be mailed to all physicians in the state as soon as available.

The forthcoming edition carries a new section entitled "The Control of Communicable Diseases," which is reprinted from a bulletin by that name and is a report of the Subcommittee on Communicable Disease Control of the Committee on Research and Standards of the American Public Health Association. "This report is official with the United States Public Health Service and has been issued as Reprint No. 1697 from Public Health Reports (Revised 1940 and 1943)."

WORK ON BULLETIN BEGUN IN 1916

"In October, 1916, a committee of the Health Officers Section of the American Public Health Association was appointed to prepare standard regulations for the administrative control of the

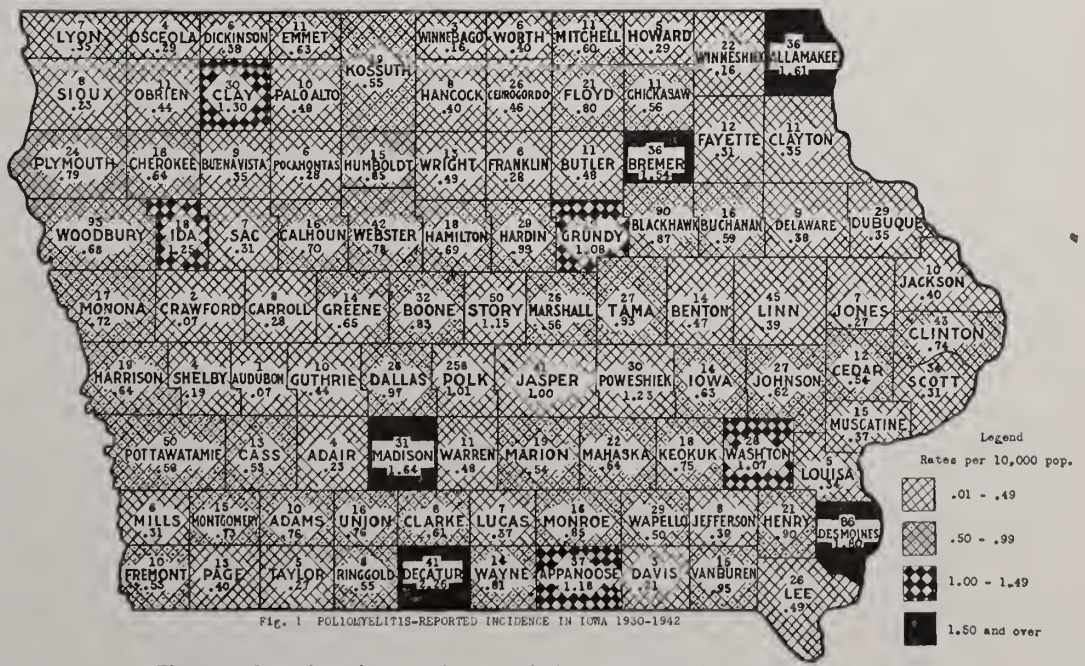


Fig. 1 POLIOMYELITIS-REPORTED INCIDENCE IN IOWA 1930-1942

The upper figure in each county is the total of reported cases for the 13-year period 1930-1942; the lower figure represents the average annual morbidity rate per 10,000 population.

communicable diseases for which notification is usually required by State and municipal health authorities throughout the United States. The report of this committee was published in Public Health Reports, Volume 32, No. 41, October 12, 1917.

"The general form of presentation and much of the matter of the 1926 revision was used in the Report of the Committee on Communicable Disease Control of the White House Conference, published in 1931.

"The revision published in 1936, Public Health Reports, Volume 50, No. 32, August 9, 1935, was made by the Subcommittee on Communicable Disease Control, of the Committee on Research and Standards of the American Public Health Association, and it was officially approved by the United States Public Health Service. The present revision has been called for because of immediate needs connected with military training, and the advisability of having procedures for communicable disease control based as nearly as practicable upon identical and authoritative information. The Subcommittee on Communicable Disease Control of the Committee on Research and Standards of the American Public Health Association has been responsible for the present text as officially approved by the Association and by the United States Public Health Service."

ISOLATION AND QUARANTINE REDEFINED

In the new edition of *Rules and Regulations*, the terms "Isolation" and "Quarantine" are defined as follows:

Isolation: "By isolation is meant the separating of persons suffering from a communicable disease, or carriers of the infecting micro-organism, from other persons, in such places and under such conditions as will prevent the direct or indirect conveyance of the infectious agent to susceptible persons."

Quarantine: "By quarantine is meant the limitation of freedom of movement of persons or animals that have been exposed to communicable disease for a period of time equal to the longest usual incubation period of the disease to which they have been exposed."

"In view of the various ambiguous and inaccurate uses to which the words 'isolation' and 'quarantine' are not infrequentliy put, it has seemed best to adopt arbitrarily the word 'isolation' as describing the limitation put upon the movements of the known sick or 'carrier' individual or animal, and the word 'quarantine' as describing the limitations put upon exposed or contact individuals."

THE SERUM-PLASMA CENTER

Blood donor clinics for pooled normal human serum numbered 114 during the twelve-month period July 1942 to June 1943. Donors totaling 3,018 contributed 716 liters of blood. Hospitals and defense areas were supplied with 987 (250 cc.) units of serum. On June 30, 1943, serum finished or in process at the Serum-Plasma Center amounted to 274 units.

Donor meetings are arranged in cooperation with the County Chief of Civilian Defense and with local sponsoring agencies including District Health Services, United Service Women, Hospitals, Chambers of Commerce, Civic Clubs, County Units of the Red Cross, and other voluntary agencies.

PREVALENCE OF DISEASE

Disease	Sept. '43	Aug. '43	Sept. '42	Most Cases Reported From
Diphtheria	34	14	45	Woodbury
Scarlet Fever	109	55	96	Mahaska, Pottawattamie, Woodbury
Typhoid Fever	4	6	6	Jackson, Scott, Webster
Smallpox	0	0	0	None
Measles	15	28	33	For the State
Whooping Cough	152	144	80	Clarke, Dallas, Decatur, Union, Washington
Brucellosis	21	39	40	For the State
Chickenpox	10	8	12	For the State
German Measles	2	3	1	Allamakee, Washington
Influenza	2	0	1	Johnson, Mitchell
Malaria	5	1	0	Lee
Mumps	16	33	58	Pottawattamie
Pneumonia	11	9	34	For the State
Poliomyelitis	107	35	20	For the State
Tuberculosis	26	54	114	For the State

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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Office of Publication, Des Moines 9, Iowa

Vol. XXXIII NOVEMBER, 1943 No. 11

THE PRESIDENT'S MEETINGS

In all probability a time never exists when some problem does not confront the medical profession. However, at this moment it seems to many of us that we as a profession were never faced with a more critical situation, nor were we ever busier, than we are at present. We have neither the time nor energy to sit down and study carefully the federal legislation which confronts us, although we realize we must become familiar with it and work against it.

Consequently, we think our president had an excellent idea when he conceived the thought of having ten meetings over the state at which these matters will be discussed by persons who have studied them and boiled them down to a point where we can assimilate them. We like his idea of an hour of relaxation afterward, too. We need an evening away from a telephone, an evening when we may visit with our colleagues freely and openly, where we may say the things which have been on our minds and try to crystallize our sentiments by discussing them with men of the same background of thought.

Dr. Woodward has chosen ten centers within fifty miles' driving distance of nearly every doctor in Iowa; he is offering talks on the emergency maternity and infant care program, which has bothered all of us, as well as on the Wagner-Murray-Dingell bill; the new Council on Medical Service and Public Relations of the American Medical Association, the National Physicians Committee, and the old age assistance program; he is also giving us two scientific talks; and best of all, he is providing us with a good excuse to get away for an evening where we may both learn and relax. We commend his meetings to your attention.

PROPHYLAXIS OF MENINGOCOCCIC MENINGITIS WITH SULFADIAZINE

Considerable significance, with promise of widespread applicability, will in all probability be attached to the study of meningococcic meningitis prophylaxis with sulfadiazine reported by Kuhns, Nelson, Feldman, and Kuhn in the October 9 issue of *The Journal of the American Medical Association*. In one group of 8,000 soldiers among whom an outbreak of meningitis occurred, 1 gram of sulfadiazine three times daily was given to each man for three days in succession. A suitable control group of 9,300 men was available. During an eight week period of observation following the sulfadiazine administration for prophylactic purposes, no further cases of meningitis appeared, while in the control group in the same period of time twenty-three cases of the disease occurred. The effect of the sulfadiazine therapy was compared between the two groups in another way. Nasopharyngeal cultures were made from 100 individuals in each group for the purpose of detecting carriers of meningococci. The carrier rate among the group to be treated was 36 per cent and among the control group 38 per cent. The procedure was repeated at intervals in the same individuals in both groups following the prophylactic therapy with the result that the number of carriers practically disappeared in the treated group, whereas there was an actual increase in the control group. Blood sulfadiazine levels taken daily in ten men after injection of the three doses averaged approximately 5 milligrams per hundred cubic centimeters. No untoward reactions occurred.

A similar study where meningitis was active was carried out in another camp. This time there were 7,000 men in the treated group and 9,500 in the control group. The dosage of sulfadiazine was decreased to 1 gram twice daily. Two cases of meningitis occurred in the treated group as compared to seventeen among the controls. The carrier rate was as effectively reduced by the smaller dosage of sulfadiazine as by the larger dose in the first study. No instance of incapacity for the scheduled basic training program as a result of the drug administration was encountered.

The authors state, "These data indicate that the prophylactic administration of sulfadiazine by mouth, even in relatively small doses, is a safe and effective method for curbing epidemics of meningococcic meningitis among large numbers of troops. This method of prophylaxis might also prove to be of value in terminating outbreaks of this disease in other situations, for example on troop transports at sea or in schools, orphanages and other institutions."

We might add that for the private physician the method would also be applicable in families where a case of meningitis has occurred. It is admitted that second cases under such circumstances are not common, nevertheless they do occur.

IOWA INTERPROFESSIONAL ASSOCIATION MEETING

The sixth annual meeting of the Iowa Interprofessional Association, held in conjunction with the annual meeting of the Iowa State Association of Registered Nurses, may well be called successful. A crowd of over five hundred doctors, nurses, dentists, veterinarians and pharmacists assembled in the large ballroom of the Hotel Fort Des Moines Wednesday evening, October 6, to hear a program of interest to all groups.

Dr. John W. Billingsley of Newton, chairman of the Committee on Public Policy and Legislation of the Iowa State Medical Society, was the opening speaker, discussing the Wagner-Murray-Dingell bill. Dr. Billingsley gave the background of the bill, explained its provisions and scope, the cost to the various groups of people, and pointed out that if it is enacted the Surgeon General of the United States Public Health Service would be a medical Czar over 110,000,000 people. He also drew attention to the fact that it is planned to bring nursing, dental, and other benefits into the bill in the near future. The doctors and pharmacists are already involved. Dr. Billingsley closed his remarks by a warning from Mr. Winston Churchill, the British Premier, who has said, "We must beware of trying to build a society in which nobody counts for anything except the politicians or an official, a society where enterprise gains no reward, and thrift no privilege."

Dr. Charles E. Friley, president of Iowa State College, was the main speaker of the evening. His subject was that of maintaining professional standards in wartime, and he gave an excellent over-all picture of how health standards are being maintained in spite of the shortage of doctors, nurses, dentists, pharmacists, and veterinarians. He spoke first of how standards have been raised in the last thirty years, but said there was still room for improvement, mentioning in this connection the tragic record of rejection for military duty because of physical disability. He stressed the need for more community cooperation, more emphasis on health education, nutrition, preventive measures, and precautions against epidemics.

He praised the home nursing and nurse's aide courses which are doing so much to alleviate the shortage of nurses; he told of the demonstration center held in Ames for five days which was attended by nurses from various parts of Iowa. Answering the question which has been raised at various times as to whether these volunteers might not infringe upon the field of professional nursing later, he expressed the opinion that they would not do so. There is great need for more nursing care in rural areas, and this is a problem to be solved after the war.

Dr. Friley elaborated on the strides which have been made in medical research in the last thirty years, but closed his talk with a discussion of the serious problems still remaining. Among these he mentioned the shift in the age group which has occurred as a result of the longer life expectancy in this country, bringing about more disorders of senescence; the severe demands on the nervous system under present-day conditions of living; and the increasing number of mental derangements.

Dr. Walter L. Bierring, State Health Commissioner, gave the concluding talk on the potentialities of chemotherapy, discussing several of the new, widely publicized drugs, giving the history of some of them, and telling how they are used today.

The JOURNAL extends its congratulations to the officers and program committee of the Iowa Interprofessional Association, and to the Iowa State Association of Registered Nurses, for a most interesting program.

KENNY CONCEPTS OF MUSCLE DYSFUNCTION IN POLIOMYELITIS DISPUTED

One result which could be expected with considerable certainty to follow the widespread publicity given Sister Kenny's views about poliomyelitis would be a reinvestigation by many scientists of the pathologic processes involved in the disease. Not only has Miss Kenny advanced a method of treatment which seems to have been universally accepted, but she has expressed concepts of muscle dysfunction which have not been so readily accepted. Briefly, these concepts embrace the terms muscle "spasm," "mental alienation" of antagonistic muscles, and "incoordination."

Three Boston physicians, Watkins, Brazier, and Schwab, working in the Departments of Physical Therapy, Psychiatry and Neurology of the Massachusetts General Hospital, report in the September 25 issue of *The Journal of the American Medical Association* the results of a study which lead them to challenge the accuracy of the Kenny concepts. Say the authors, "In order further to elucidate these concepts of muscle 'spasm,' 'mental alienation' and 'incoordination' we have studied the elec-

trical discharges of muscles while at rest, during passive stretching and during voluntary contraction, both in the early and in the late stages of poliomyelitis. The observations have been compared with similar studies on normal controls and on patients having traumatic lesions of peripheral nerves. These investigations have yielded information on the disorder of muscle function in poliomyelitis and have led us to conclude that the Kenny concepts of muscle involvement in this disease, although the basis of an excellent type of treatment, are inadequate as a physiologic explanation of the dysfunction present."

Electromyograms were recorded by means of an electroencephalographic apparatus. Eleven cases of poliomyelitis were studied and the results compared with recordings from normal controls, from patients with peripheral nerve injuries, including war wounds, from patients with infectious polyneuritis, and from patients with muscle spasm secondary to fractures.

Normal muscles at complete rest do not give action potentials as recorded by the electromyogram. Weakened muscles, on the other hand, yield spontaneous electrical discharges when relaxed. In the poliomyelitis cases studied the "muscles which clinically showed the most loss of power gave rise to these discharges more frequently than did their antagonists, which usually showed clinical 'spasm.' This electrical activity appeared to be an index of weakness and could not be correlated with clinical 'spasm.'" Furthermore, these spontaneous electrical discharges in paretic muscles become more marked in the later stages of the disease (three months) and continue throughout the reparative stages of the disease. Similar recordings were obtained in muscle studies during regeneration of traumatized peripheral nerves.

The response of muscles to passive stretching in the early and late stages of poliomyelitis brought out electrical discharges of a voltage higher than any which could be elicited from normal muscles by such manipulation. It was found that this abnormality occurred primarily in the partially paralyzed muscles and only minimally in unparalzed muscles which showed clinical "spasm." When there was equal degree of weakness in a pair of antagonistic muscles there was found equal irritability on stretching as recorded electrically, even though clinically one muscle showed more "spasm." The authors conclude, therefore, "that when one muscle is functionally weaker than its antagonist the weaker muscle will show the greater abnormality electromyographically. That this weakness is not due to 'alienation,' as suggested by Kenny, but to greater involvement by the disease process was further substantiated by loss of electrical excitability in the weak muscles as measured by voltage-capacity curves."

Some evidence in support of the Kenny concept of "incoordination" was disclosed in the study, although the authors preferred the term "disordered reciprocal innervation" for this type of dysfunction.

Obviously, studies of the type recorded by the Boston scientists are highly desirable from the point of view of progress in the direction of final solution of the true situation as regards poliomyelitis muscle dysfunction.

STANDING ORDERS FOR NURSES IN INDUSTRY*

The following article, which was prepared by the Council on Industrial Health of the American Medical Association, was published in the August 28 issue of *The Journal of the American Medical Association*. The demands for reprints of this article have been so extensive it was suggested that the Journal of the Iowa State Medical Society republish the article in its entirety because of its timeliness for those who are interested, and all should be, in industrial health. It is very interesting reading, as well as useful, whether or not one is doing any type of industrial work. As it is pointed out, in the rapid expansion of industry authority has been delegated to laymen or the nursing profession, neither qualified to assume such responsibility. This, in a number of instances, was disastrous to the patient, costly to the employer and, in the final analysis, critically reflects on the medical profession.

COUNCIL ON INDUSTRIAL HEALTH

THE COUNCIL ON INDUSTRIAL HEALTH HAS PREPARED THE FOLLOWING REPORT AS AN AID TO PHYSICIANS IN INDUSTRY AND TO COMMITTEES ON INDUSTRIAL HEALTH IN STATE AND COUNTY MEDICAL SOCIETIES CALLED ON TO FORMULATE STANDING ORDERS FOR INDUSTRIAL NURSES.

C. M. PETERSON, M.D., Secretary.

Standing Orders for Nurses in Industry

For some time the medical and nursing professions have been concerned about the employment of nurses in industry without adequate medical supervision. The Council on Industrial Health has therefore been requested to formulate standing orders for industrial nurses which can be adapted to meet the requirements of individual industrial medical departments. If no responsible industrial medical authority exists, it is recommended that the nurse request helpful instruction in this regard from the committee on industrial health of the appropriate county or state medical society.

GENERAL RELATIONSHIPS

Standing orders represent a preliminary understanding between physician and assisting personnel about routine conduct of a medical service. In establishing such orders in an industrial medical depart-

*From the Committee on Industrial Health.

ment, several considerations need to be borne in mind:

1. The greater the amount of personal supervision exercised by the physician directly in the industrial environment, the better is the industrial health service.
2. Standing orders cannot be written to meet every situation likely to arise in industry. They must be modified to meet specific requirements and in accordance with the training and professional competence of the assisting personnel. They should be signed by the supervising medical authority and posted prominently in the medical department.
3. The nurse in industry should assume no responsibility for service outside the field of her professional training. This applies particularly to individual case management, from which the nurse should rigidly abstain except:
   (*a*) In emergencies demanding immediate independent judgment and action.
   (*b*) Procedures of preliminary or first aid nature routinely required by reason of the nature of the work and which are clearly stipulated in the standing orders.

This statement confines itself mainly to these last named aspects of mediconursing relations in industry. Additional reports on other functions of industrial nurses will follow as needed.

EMERGENCY PROCEDURE IN INDUSTRY

General principles which operate in all emergency situations apply to industry as well. They are:

1. Call a physician immediately.
2. Stop bleeding.
3. Restore breathing.
4. Prevent shock and infection.
5. Do no more than is actually needed.

The supervising physician should assure himself that these instructions are thoroughly understood and should institute special training when necessary. Nurses in industry should qualify as first aid instructors.

Emergency Supplies.—Emergency packs with essential sterile supplies should be available at all times in the medical department and in first aid kits suitably located throughout the plant. Regular inspection is necessary.

Hemorrhage.—Bleeding calls for immediate attention. The nurse should notify the physician and, until he arrives, proceed as follows:

1. Expose the wound.
2. Remove obvious foreign matter.
3. Apply pressure.

Direct manual or bandage pressure firmly applied over sterile gauze packing at the bleeding site will effectively control moderate hemorrhage. Indirect compression is indicated in excessive bleeding not controllable by direct methods. Digital compression over the vessel against underlying structures either adjacent to the wound or at the nearest pressure point will usually suffice until the physician arrives. Indirect pressure should be applied proximal or distal to the wound, in keeping with the arterial or venous character of the bleeding. Hemostats or clamps should be applied whenever the emergency warrants it.

Avoid applying a tourniquet if possible. If severe bleeding in an extremity suggests the use of a tourniquet, apply a blood pressure cuff.

The nurse should remember that:

1. A direct pressure bandage should not act as a tourniquet.
2. A tourniquet must be periodically released at least every fifteen minutes.
3. No dressing should be applied over a tourniquet.
4. Asepsis must be observed at all times.

Asphyxia.—Cessation of breathing from any cause demands:

1. Artificial respiration *at once* and *at the site of the accident.*
2. Notification of the physician.
3. Maintenance of body warmth. Avoid excessive heating.

All industrial nurses should demonstrate ability to apply artificial respiration by the prone pressure method and should realize the need for its continuous application until breathing is restored or until careful repeated medical examination advises otherwise.

Shock.—Early and adequate shock treatment is life saving. Do not delay.

Common symptoms of shock following injury are pallor, perspiration and rapid thready pulse. Emergency management by the nurse should include:

1. Notification of the physician.
2. Removal of cause. If shock is due to hemorrhage, control it. If it is due to trauma not associated with bleeding, all active treatment of injury should be deferred until shock management has been instituted. Wounds should be covered with sterile dressings to prevent infection.
3. Relief of pain: 1/6 to 1/4 grain (0.010 to 0.016 Gm.) of morphine sulfate, repeated if necessary, or barbiturates as routinely ordered except in injuries to the head or trunk.
4. Keeping the patient warm, dry, and on his back with his head low. Avoid overheating.

ROUTINE NURSING CARE OF INJURIES

Successful medical management of industrial injuries depends on:

1. Prompt treatment.
2. Meticulous cleansing and dressing.
3. Examination of deep as well as of superficial structures.

To accomplish these aims the routine functions of the nurse should be confined to care of minor wounds as follows:

1. Protect wound with sterile gauze while adjacent area is cleansed with soap and water or solvent.
2. Discard protective dressing and clean wound margins.
3. Irrigate wound with sterile water or isotonic solution of sodium chloride.
4. Apply antiseptic of physician's choice.
5. Apply dry sterile dressing, interfering as little as possible with function. Sterile dressings should be covered with protective material for use at work. The worker should be instructed not to remove the dressing but to return to the medical department if it becomes loosened or uncomfortable.

The nurse should do no more than is actually needed. The following conditions require direct medical supervision:

1. Wounds requiring débridement.
2. Those with obvious or suspected involvement of deep structures.
3. Wounds with edges which do not approximate.
4. Wounds about the head and face.
5. Contaminated wounds requiring tetanus prophylaxis.

Management of Common Injuries.—Injuries most likely to be encountered in industry include the following conditions:

1. Abrasions: Clean and apply dry dressing. Extensive or deep loss of skin, especially about the fingers and hands, needs medical attention.
2. Contusions: Treat with cold compresses directly following injury, later with moist heat. If soreness or disability persists or if deep involvement is suspected, refer to the physician.
3. Lacerations: Clean and apply dressing as directed. Any possibility of injury to joints,

nerves or tendons should be brought to the physician's attention at once.

4. Puncture Wounds: Puncture wounds through the skin need direct medical supervision to avoid or treat severe infection. If superficial, clean and apply sterile dressing.
5. Slivers and Splinters: Penetration through the skin by slivers or splinters always carries the risk of an infected puncture wound and should be treated as such. Those lodged superficially and easily removed without added trauma or incision may be extracted aseptically by the nurse.
6. Burns and Scalds: Clean minor burns with soap and water. Apply petrolatum or 5 per cent boric acid ointment, bandaging firmly without interfering with function. Leave blisters alone.

   In all other cases:

   (*a*) Notify the physician.

   (*b*) Cover the burned area with a sterile dressing or sheet moistened with isotonic solution of sodium chloride or 5 per cent sodium bicarbonate solution.

   (*c*) Combat pain and shock.

   In the absence of specific orders, chemical burns should be treated by irrigation or immersion in water for at least twenty minutes and then by dressing.
7. Sprains and Strains: Treat first with cold compresses, elevation of the part and rest. A physician's advice is necessary regarding strapping, other methods of support or fixation, further examination or special therapy.

FRACTURES

Preliminary steps for the nurse are:

1. Call a physician at once.
2. Keep the patient quiet and warm.
3. Immobilize before any movement is attempted.
4. Do not attempt reduction.
5. If the fracture is compounded, cover the site of the fracture with a dry sterile dressing. *Do not cleanse or reduce.*

Special instruction in splinting should be provided every industrial nurse.

EYE INJURIES

Rigid aseptic technic must be scrupulously observed in all eye conditions. Never attend consecutive patients without sterilization of instruments and careful hand washing. Remember that early symptoms of infection simulate foreign body.

Minor Burns.—Do not apply ointments to minor burns of the skin about the eye. Apply a sterile dressing and refer to the physician.

Burns of the Eye.—1. Chemical Burns: Irrigate chemical burns of the eye *copiously* and *at once* with water, preferably by immersion. Neutralizing solutions are usually inadequate or unavailable. The rapidity with which the irrigation occurs is more important than the type of solution used. Continue to irrigate at least twenty minutes by the clock.

2. Hot Metal Burns: Apply a sterile pad and refer at once to the physician. Do not irrigate. An anesthetic should be applied as ordered by the doctor.

Every burn of the eye should receive competent medical attention early.

Foreign Bodies.—The nurse should attempt to remove only those foreign bodies of the eye which can be readily located and which can be easily washed out or removed with a dry sterile cotton applicator. An antiseptic may be applied if the physician so orders.

Direct medical care is essential:

1. If the foreign body cannot readily be located. Stains to aid in the location of foreign bodies should be used only on specific medical order.
2. If removal requires any instrumentation.
3. If irritation or pain persists after removal.

No person with an eye injury should be discharged without examination by a physician.

"Flash" Injury.—First aid treatment should include:

1. Local anesthetic as ordered.
2. Cold compresses.
3. Sedatives.

Persistent pain following flash needs medical examination and treatment.

Conjunctivitis.—Conjunctivities or other forms of conjunctival irritation should be referred routinely to the physician or ophthalmologist.

HEAD INJURIES

Until the physician takes over, the nurse should:

1. Keep the patient lying down.
2. Elevate the head.
3. Apply ice cap or cold compress. *No sedatives.*
4. Record pulse and respiration every ten minutes.

Clip or shave and cleanse areas adjacent to scalp lacerations, and cover with a sterile pad.

CHEST AND ABDOMINAL INJURIES

Contusions of the chest and abdomen with or without external evidence of injury may result in trauma to underlying organs.

Until seen by the physician, such patients must be:

1. Kept warm and quiet.
2. Allowed no sedatives.
3. Have pulse, temperature and respiration recorded frequently.
4. Suitably bandaged to avoid contamination.

In case of abdominal injury give nothing by mouth.

NONOCCUPATIONAL ILLNESS

Treatment of injury or illness which has no relation to occupation is not a function of the industrial medical department except:

1. First aid for emergency sickness. Such measures as the situation demands must be taken until notification of the family physician discharges responsibility.
2. For minor ailments which temporarily interfere with an employee's comfort or ability to complete a shift and for the relief of which a physician would not ordinarily be consulted.

In all relationships of this kind, judgment and tact are required of the industrial nurse. Several principles apply:

1. Before giving any treatment, the temperature, pulse, general appearance and a history of the presenting complaint should be recorded.
2. Palliative treatment, especially for chronic or recurring disorders, should not be repeated.

Every properly trained nurse understands the difference between attention of this kind and systematic treatment.

CARE OF MINOR ILLNESS AND SYMPTOMS

Persistent or augmenting symptoms of irritation, discomfort or disability suggest faulty work environment. The nurse should not hesitate to ask for medical examination of workers and of the premises.

Fever.—A rise in temperature of 1 degree suggests medical consultation before work is resumed. Findings should be checked by repeated thermometer recordings.

Headache.—Record temperature. If headache is accompanied by dizziness, nausea, vomiting, stiff neck, injury, history of recurrence, fever, general malaise or other symptoms the patient needs medical attention. If not, give an analgesic as ordered by the physician.

Remember that headache or dizziness may be premonitory signs of intoxication.

Unconsciousness.—1. Fainting. Usual symptoms are pallor, with shallow breathing, slow and weak pulse. Period of unconsciousness is of short duration.

Keep the patient lying down with head lowered until fully recovered. Be sure the patient has plenty of fresh air. Clothing should be loosened and stimulating inhalants used, such as ammonia or smelling salts.

2. Other Causes. If other signs are present or if unconsciousness persists longer than a few minutes, call for medical assistance. *Give nothing by mouth.*

Toothache.—If there is a cavity, the nurse may pack it with cotton dipped in oil of cloves for temporary relief. For further examination and treatment refer to a dentist.

Nosebleed.—Spontaneous nosebleed may be treated by cold packs or pinching the sides of the nose against the septum. Keep the patient sitting erect or standing and loosen the collar if it tends to constrict the neck. Advise the patient not to breathe or blow through the nose for an hour or two after bleeding has stopped.

Bear in mind that certain occupational exposures are manifested by nasal damage and bleeding.

Sore Throat.—Patients with sore throat may be given a hot saline gargle if they have a normal temperature. Do not "paint" the throat. Any persistent sore throat or one associated with fever needs medical care at home.

Respiratory Irritation or Infection.—Repeated or persistent signs of bronchial or chest irritation without associated infection suggests an unfavorable occupational exposure. A plant hygiene survey is indicated.

Persons having acute respiratory infections with elevated temperature, cough, sneezing or nasal discharge should be sent home for proper segregation, rest and medical attention. In mild infections, work may be continued if under medical or nursing supervision simple measures will control symptoms and prevent spread.

Available medical evidence at the present time cannot support routine administration of cold vaccines or vitamin preparations as methods of reducing the incidence or severity of acute respiratory infections.

Frequent colds or chronic respiratory conditions require special medical consideration.

Abdominal Distress.—Early signs of occupational intoxication may be abdominal in character. In any case abdominal distress, nausea or pain, especially if severe or persistent, requires competent medical diagnosis and management.

Laxatives should never be dispensed from an industrial medical department.

Dysmenorrhea.—Painful menstruation not associated with fever or gastro-intestinal disturbances may be treated with an analgesic ordered by the physician and the patient placed at rest with heat to the lower part of the abdomen. If there is no relief or if other signs or symptoms present themselves, she should be referred to her physician.

Patients with recurrent severe dysmenorrhea should not be given palliative treatment. They should be referred for examination and treatment.

DERMATITIS

Management of skin disorders in industry depends on cause.

Specific Irritants.—Materials or processes in the plant capable of causing skin disease should be identified and special orders provided for control. Competent dermatologic consultation is essential in all obscure or refractory situations.

Nonspecific Skin Disease.—Nonspecific skin irritation in industry is almost entirely assignable to faulty personal hygiene. The nurse can do much to improve washing routine, the use of dependable protective coverings, the wearing of clean work clothing, maintenance of satisfactory housekeeping in the plant and the general maintenance of accepted hygienic procedure.

PREGNANCY

A definite policy regarding employment during pregnancy should embrace the following recommendations:

1. The employee should notify the proper authority in industry about her pregnancy within the first trimester.
2. She should obtain a statement from her own physician—
   (*a*) That her work is not contraindicated.
   (*b*) Regarding the length of time she should work.
3. Special attention should be given to the nature of the work. Pulling, pushing and lifting must be kept within safe limits. Rest periods will tend to minimize emotional and physical instability during pregnancy.
4. Ordinarily work should terminate by the thirty-second week (within six weeks of term). If contraindications arise within this period, the employment should stop.
5. Return to work is inadvisable before six weeks after delivery and then only on notification of the employer by the physician.

EQUIPMENT AND SUPPLIES

Space which can command privacy and which can be kept clean and properly prepared for emergency and routine services by the nurse should be provided in the plant. Special attention should be given to heating, light, ventilation and accessibility.

The accompanying check list of furnishings and supplies suitable for a small plant dispensary should be augmented by equipment for emergency treatment or other special medical requirements as ordered by the plant physician or other medical adviser.

Furnishings and Supplies

General Furnishings:

1. Sink
2. Instrument cabinet
3. Sterilizer
4. Dressing table
5. Leg rest
6. Cot
7. Stretcher
8. Mirror 10 by 12 inches
9. Foot-pedal waste can
10. Waste basket
11. Storage cabinets
12. Paper towel rack
13. Adhesive rack
14. Record file
15. Scale

Instruments and Supplies:

1. Scalpels
2. Splinter forceps
3. Tissue forceps
4. Hemostatic forceps
5. Bandage scissors
6. Surgical scissors
7. Hand magnifying glass
8. Syringes
9. Assorted hypodermic needles
10. Assorted surgeons' needles
11. Needle holder
12. Assorted bandages
13. Adhesive plaster
14. Cotton
15. Applicators
16. Assorted sutures
17. Assorted splints
18. Assorted jars and basins
19. Test tubes
20. Safety razor and blades
21. Hot water bottle
22. Ice cap
23. Crutches
24. Tourniquet

Drugs: (as ordered by the physician or medical adviser)

1. A stimulant
2. An emetic
3. Analgesics and sedatives
4. Antiseptics

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(a) The Industrial Medical Department.
(b) Plant Hygiene Studies.
(c) Outline of Procedure for Physicians in Industry.
(d) Women in Industry.
(e) Control of Common Respiratory Infections.
(f) Indiscriminate Administration of Vitamins to Workers in Industry.
(g) Recognition and Prevention of Industrial Dermatitis.

Roster of Iowa Physicians in Military Service

As of October 25, 1943

Adair County

Cornell, D. D., Greenfield (APO 41, San Francisco, Cal.) ..... Capt., A.U.S.
Gantz, A. J., Greenfield (APO Los Angeles, Cal.) .. Capt., A.U.S.

Adams County

Willett, W. J., Carbon (Camp Maxey, Tex.) ..... Capt., A.U.S.

Allamakee County

Hogan, P. W., Waukon
Ivens, M. H., Waukon (Camp Shelby, La.)
Kiesau, M. F., Postville (Jefferson Barracks, Mo.) .. Major, A.U.S.
Rominger, C. R., Waukon (Camp Claiborne, La.) ..... A.U.S.

Appanoose County

Condon, F. J., Centerville (Owensboro, Ky.) .. Major, U.S.P.H.S.
Edwards, R. R., Centerville (Trenton, N. J.) ..... 1st Lt., A.U.S.
Huston, M. D., Centerville (Randolph Field, Tex.) Capt., A.U.S.

Audubon County

Koehne, F. D., Audubon (Oroville, Wash.) ..... Major, A.U.S.

Benton County

Koontz, L. W., Vinton (APO 726, Seattle, Wash.) .. Capt., A.U S.
Senfeld, Sidney, Belle Plaine

Black Hawk County

Bickley, D. W., Waterloo (Camp Howze, Texas) .... 1st Lt., A.U.S.
Bickley, J. W., Waterloo (Fort Sill. Okla.) ..... 1st Lt., A.U.S.
Butts, J. H., Waterloo (Galveston, Texas) ... Lt. Comdr., U.S.N.R.
Cooper, C. N., Waterloo (Seattle, Wash.) ... Lt. Comdr., U.S.N.R.
Ellyson, C. D., Waterloo (Beaufort, S. C.) ..... Lt., U.S.N.R.
Ericsson, M. G., Cedar Falls (Camp Barkeley, Tex.) Capt., A.U.S.
Hartman, H. J., Waterloo (APO 33, San Francisco) Cal.) ..... Capt., A.U.S.
Henderson, L. J., Cedar Falls (Camp Roberts, Cal.) .Capt., A.U.S.
Hoyt, C. N., Cedar Falls (McClellan Field, Ala.) .1st Lt., A.U.S.
Ludwick, A. L., Waterloo (APO 813, New York, N. Y.) ..... Capt., A.U.S.
Marquis, F. M., Waterloo (APO 180, Los Angeles, Cal.) ..... Capt., A.U.S.
O'Keefe, P. T., Waterloo (APO 79, Los Angeles, Cal.) ..... Capt., A.U.S.
Paige, R. T., LaPorte City (Des Moines, Ia.) .Lt. Comdr., U.S.N.R.
Rohlf, E. L., Jr., Waterloo (APO New York, N. Y.) ..... 1st Lt., A.U.S.
Seibert, C. W., Waterloo (Colorado Springs, Colo.) .. Capt. A.U.S.
Smith, E. E., Waterloo (APO 709, San Francisco, Cal.) ..... Major, A.U.S.
Smith, R. I., Waterloo (Reno, Nevada) ..... Capt., A.U.S.
Smith, R. G., Cedar Falls (APO 512, New York, N. Y.) ..... Major, A.U.S.
Trunnell, T. L., Waterloo (care P.M., New York, N. Y.) ..... Lt., U.S.N.R.

Boone County

Brewster, E. S., Boone (Camp Chaffee, Ark.) .... Major, A.U.S.
Healy, M. J., Boone
Shane, R. S., Pilot Mound (Des Moines, Ia.) Lt. Col., A.U.S.

Bremer County

Amlie, P. J., Tripoli (Madison, Wis.)
Blum, O. S., Waverly (Fleet PO, New York, N. Y.) .. Lt., U.S.N.R.
Rathe, H. W., Waverly (Swannanoa, N. C.) ..... Capt., A.U.S.
Shaw, R. E., Waverly (Long Beach, Cal.) ..... 1st Lt., A.U.S

Buchanan County

Barton, J. C., Independence (St. Paul, Minn.) ... Lt. Col., A.U.S.
Hersey, N. L., Independence (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Leehey, P. J., Independence (APO 957, San Francisco, Cal.) ..... Capt., A.U.S.
Loeck, J. F., Aurora (Camp Rucker, Ala.) ..... Capt., A.U.S.

Buena Vista County

Almquist, R. E., Albert City (Camp Sbelby, Miss.) .Capt., A.U.S.
Brecher, P. W., Storm Lake (Camp White, Ore.) .Lt. Col., A.U.S.
Mailliard, R. E., Storm Lake (Camp Bowie, Tex.) .Lt. Col., A.U.S.
Shope, C. D., Storm Lake (Fort Des Moines, Ia.) .. Capt., A.U.S.
Witte, H. J., Marathon (Banning, Cal.) ..... Major, A.U.S.

Butler County

Anderson, B. V., Greene (Fleet PO, Seattle, Wash.) .... U.S.N.R.
James, R. A., Allison (Mare Island, Cal.)
Rolfs, F. O., Parkersburg (Springfield, Mo.)

Calhoun County

Grinley, A. V., Rockwell City (APO 507, New York, N. Y.) ..... Capt., A.U.S.
Hobart, F. W., Lake City (Camp Grant, Ill.) .... Capt., A.U.S.
Peek, L. H., Lake City (Jefferson Barracks, Mo.) .. Capt., A.U.S.
Stevenson, W. W., Rockwell City (Port Hueneme Cal.) ..... Lt. Comdr., U.S.N.R.
Weyer, J. J., Lohrville (Camp Carson, Colo.) .... 1st Lt., A.U.S.

Carroll County

Anneberg, A. R., Carroll (Camp Barkeley, Texas)
Anneberg, W. A., Carroll
Cochran, J. L., Carroll (Gulfport, Miss.)
Cross, D. L., Coon Rapids ..... Lt., U.S.N.R.
Freedland, Maurice, Coon Rapids
Morrison, J. R., Carroll (Camp Maxey, Texas) ..... Capt., A.U.S.
Morrison, R. B., Carroll (APO 634, New York, N. Y.) Capt., A.U.S.
Pascoe, P. L., Carroll (Bowman Field, Ky.) ..... Capt., A.U.S.
Scannell, R. C., Carroll (APO. New York, N. Y.)
Tindall, R. N., Coon Rapids (APO 944, Seattle, Wash.) ..... Major, A.U.S
Wyatt, M. R., Manning (Charlotte, N. C.) ..... Capt. A.U.S.

Cass County

Egbert, D. S., Atlantic (Omaha, Nebr.) ..... Major, A.U.S.
Longstreth, C. M., Atlantic (Norman, Okla) .Lt. Comdr., U.S.N.R.
Needles, R. M., Atlantic (Davis, Cal.) ..... Capt., A.U.S.
Petersen, M. T., Atlantic (Topeka, Kan.) ..... Capt., A.U.S.

Cedar County

Laughlin, R. M., Tipton (San Diego, Cal.) ..... Lt., U.S.N.R.
Mosher, M. L., West Branch (Camp Gruber, Okla.) ..... Capt., A.U.S.
O'Neal, H. E., Tipton (Camp Polk, La.) ..... Lt. Col., A.U.S.

Cerro Gordo County

Adams, C. O., Mason City (Brigham City, Utah) ... Capt., A.U.S.
Egloff, W. C., Mason City (Mesa, Ariz.)
Flickinger, R. R., Mason City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Hale, A. E., Dougherty (Camp Hale, Colo.)
Harris. R. H., Mason City (Columbus, Ohio)
Harrison, G. E., Mason City (Boston, Mass.) ..... Col., A.U.S.
Houlahan, J. E., Mason City (Sacramento, Cal.)
Lannon, J. W., Clear Lake (APO 758, New York, N. Y.) ..... Capt., A.U.S.
Long, D. L., Mason City (Santa Ana, Cal.)
Marinos, H. G., Mason City (APO 25, San Francisco, Cal.) ..... Capt., A.U.S.
Sternhill, Irving, Mason City (APO New York, N. Y.)

Cherokee County

Bullock, G. D., Washta (Camp Livingston, La.) .... Capt., A.U.S.
Ihle, C. W., Jr., Cleghorn (Camp San Luis Obispo, Cal.) ..... Major, A.U.S.
Noble, R. P., Cherokee (APO 634, New York, N. Y.) .Capt., A.U.S.
Swift, C. H., Jr., Marcus (Fort Bliss, Texas) .... Capt., A.U.S.

Chickasaw County

Caulfield, J. D., New Hampton (Denver, Colo.) .... Capt., A.U.S.
Murphey, A. L., Fredericksburg (APO 3470, San Francisco, Cal.) ..... Capt., A.U.S.
O'Connor, E. C., New Hampton (Camp Crowder, Mo.) ..... Capt., A.U.S.
Richmond, P. C., New Hampton (Camp Gruber, Okla.) ..... Capt. A.U.S.

Clay County

Adams, G. W., Royal (Fort Clayton, Panama Canal Zone)
Edington, F. D., Spencer (Lowry Field, Colo.) ..... Col., A.U.S.
Jones, C. C., Spencer (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
King, D. H., Spencer (Pendleton, Ore.) ..... Capt., A.U.S.

Clayton County

Anderson, H. M., Strawberry Point (Camp Crowder, Mo.) ..... 1st Lt., A.U.S.
Rhomberg, E. B., Guttenberg (Camp Wallace, Texas) .Capt.,A.U.S.

Clinton County

Amesbury, H. A., Clinton (Portland, Ore.) ..... Capt., A.U.S.
Burke, J. C., Clinton (Great Bend, Kan.) ..... A.U.S.
Christensen, E. D., Grand Mound (Iowa City)
Ellison, G. M., Clinton (Shreveport, La.) ..... Capt., A.U.S.
Hill, D. E., Clinton
King, R. C., Clinton (Camp Chaffee, Ark.)
Lenaghan, R. T., Clinton (Fleet PO, San Francisco, Cal.) ..... U.S.N.R.
Meyer, A. K., Clinton (Denver, Colo.)
Norment, J. E., Clinton (Mare Island, Cal.)
Riedesel, E. V., Wheatland (Fort Douglas, Utah)
Snyder, D. C., De Witt
Van Epps, E. F., Clinton (Palm Springs, Cal.) ..... Capt., A.U.S.
Waggoner, C. V., Clinton (Seattle, Wash.) .. Lt. Cmdr., U.S.N.R.

Crawford County

Fee, C. H., Denison (Dunnellon, Fla.) ..... Capt., A.U.S.
Grau, A. H., Denison ..... Lt. Comdr., U.S.N.R.
Maire, E. J., Vail (San Francisco, Cal.)
Wetrich, M. F., Manilla (San Antonio, Tex.)

Dallas-Guthrie Counties

Byrnes, A. W., Guthrie Center (Fort Custer, Mich.) .Major. A.U.S.
Fail, C. S., Adel (Pacific Beach, Wash.) ..... Lt., U.S.N.R.
Margolin, J. M., Perry (Camp Cooke, Cal.) ..... Capt., A.U.S.
McGilvra. R. I., Guthric Center (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Mullmann, A. J., Adel (Washington, D. C.) ..... Capt., A.U.S.
Nicoll, C. A., Panora (Camp Chaffee, Ark.) ..... Capt., A.U.S.
Osborn, C. R., Dexter (San Francisco, Cal.) ..... Lt., U.S.N.R.
Todd, D. W., Guthrie Center (Camp McCoy, Wis.) ..... 1st Lt., A.U.S.
Wilke, F. A., Woodward (APO 627, New York, N. Y.) ..... 1st Lt., A.U.S.

Davis County

Fenton, C. D., Bloomfield (Carlisle Barracks, Pa.)..Capt., A.U.S.
Gilfillan, G. W., Bloomfield (Oceanside, Cal).Lt. Comdr., U.S.N.R.

Decatur County

Doss, W. N., Leon (APO 924, San Francisco, Cal.)
Gamet, E. E., Lamoni (Tacoma, Wash.)

Delaware County

Baumgarten, Oscar, Earlville (APO 3492, New York, N. Y.) A.U.S.
Clark, R. E., Manchester (APO 600, New York, N. Y.)
.....1st Lt., A.U.S.

Des Moines County

Eigenfeld, M. L., Burlington (Camp Bowie, Texas) .....1st Lt., A.U.S.
Heitzman, P. O., Burlington (Fort Baker, Cal.)....Capt., A.U.S.
Jenkins, G. D., Burlington (West Point, N. Y.)....Lt. Col. A.U.S.
Lohmann, C. J., Burlington (Fort Lewis, Wash.)..Major, A.U.S.
McKitterick, J. C., Burlington (Saunderstown, R. I.) .....Lt. Comdr., U.S.N.R.
Moerke, R. F., Burlington (Abilene, Texas).....1st Lt., A.U.S.
Sage, E. C., Burlington.....Lt. Comdr., U.S.N.R.

Dickinson County

Buchanan, J. J., Milford (Fleet PO, San Francisco, Cal.)
..... Lt., U.S.N R.
Henning, G. G., Milford (Camp Adair, Ore.).....Major, A.U.S.
Nicholson, C. G., Spirit Lake (Sawtelle, Cal.).....Capt., A.U.S.
Rodawig, D. F., Spirit Lake (Fort Hancock, N. J.) .....Capt., A.U.S.

Dubuque County

Beddoes, M. G.,S. Cascade (APO San Francisco, Cal.).Capt., A.U.
Conzett, D. C., Dubuque (Fort Riley, Kan.).....Lt. Col., A.U.S.
Cunningham, J. C., Dubuque (Fairfield, Ohio)....Capt., A.U.S.
Edstrom, Henry, Dubuque (Clinton, Iowa).....Major, A.U.S.
Entringer, A. J., Dubuque (APO 41, San Francisco, Cal.) .....Capt., A.U.S.
Hall, C. B., Dubuque (Lubbock, Texas).....1st Lt., A.U.S.
Knoll, A. H., Dubuque (San Francisco, Cal.)....Major, A.U.S.
Langford, W. R., Epworth (APO 948, Seattle, Wash.) .....Capt., A.U.S.
Lavery, H. B., Dubuque (Washington, D. C.)....Lt. Col., A.U.S.
Leik, D. W., Dubuque (Wichita Falls, Tex.)....1st Lt., A.U.S.
Mueller, J. J., Dubuque (Hattiesburg, Miss.)....1st Lt., A.U.S.
Olson, P. F., Dubuque (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.
Painter, R. C., Dubuque (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Paulus, J. W., Dubuque (APO San Francisco, Cal.) 1st Lt., A.U.S.
Plankers, A. G., Dubuque (APO 758, New York, N. Y.) .....Major, A.U.S.
Quinn, E. P., Dubuque (Brentwood, L. I.).....Major, A.U.S.
Scharle, Theodore, Dubuque (APO Seattle, Wash.) Capt., A.U.S.
Schueller, C. J., Dubuque (APO 758, New York, N. Y.) .....1st Lt., A.U.S.
Sharpe, D. C., Dubuque (Fort Leonard Wood, Mo.)..Major, A.U.S.
Smith, C. W., Dubuque (Fleet PO, San Francisco, Cal. .....Lt., U.S.N.R.
Steffens, L. F., Dubuque (Camp Chaffee, Ark.)..Lt. Col., A.U.S.
Straub, J. J., Dubuque (Corpus Christi, Texas)....Lt., U.S.N.R.
Ward, D. F., Dubuque (Rochester, Minn.)...Lt. Comdr., U.S.N.R.

Emmet County

Clark, J. P., Estherville (APO New York, N. Y.)..Capt., A.U.S.
Miller, O. H., Estherville (Gowen Field, Idaho) .....Lt. Comdr., U.S.N.R.

Fayette County

Camp, D. E., West Union (Camp Blanding, Fla.)...Capt.. A.U.S.
Gallagher, J. P., Oelwein (Pensacola, Fla.).....Lt., U.S.N.R.
Henderson, W. B., Oelwein (St. Louis, Mo.).....Major, A.U.S.
Hess, A. M., West Union (Albuquerque, N. Mex.)..1st Lt., A.U.S.
Moen, H. P., West Union (Camp Barkeley, Texas)..Capt., A.U.S
Sulzbach, J. F., Oelwein

Floyd County

Baltzell, W. C., Charles City (Camp McCoy, Wis.)..Major, A.U.S.
Flater, N. C., Floyd (APO Los Angeles, Cal.)....Capt., A.U.S.
Knight, R. A., Rockford (San Diego, Cal.).....Lt., U.S.N.R.
Mackie, D. G., Charles City (Topeka, Kan.)....1st Lt., A.U.S.
Miner, J. B., Jr., Charles City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Tolliver, H. A., Charles City (San Pedro, Cal.)....Capt., A.U.S.

Franklin County

Byers, W. L., Sheffield (Jefferson Barracks, Mo.).1st Lt., A.U.S.
Hedgecock, L. E., Hampton (care PM, San Francisco, Cal.) .....Lt., U.S.N.R.
Randall, W. L., Hampton (Oceanside, Cal.).....Lt., U.S.N.R.
Walton, S. G., Hampton (Camp Robinson, Ark.) 1st Lt., A.U.S.

Fremont County

Kerr, W. H., Hamburg (Camp Phillips, Kan.)....Capt., A.U.S.
Marrs, W. D., Tabor (APO 846, New York, N. Y.) .....1st Lt., A.U.S.
Wanamaker, A. R., Hamburg (Los Angeles, Cal.)..Capt., A.U.S.

Greene County

Cartwright, F. P., Grand Junction (Boise, Idaho)...Capt., A.U.S.
Castles, W. A., Jr., Rippey (APO San Francisco, Cal.) .....Capt. A.U.S.
Hanson, L. C., Jefferson (Camp Rucker, Ala.)...1st Lt., A.U.S.
Jongewaard, A. J., Jefferson (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.
Limberg, J. I., Jr., Jefferson (APO San Francisco, Cal.; .....Capt., A.U.S.
Lohr, P. E., Churdan (San Diego, Cal.).....A.U.S.

Grundy County

Rose, J. E., Grundy Center (Norman, Okla.) Lt. Comdr., U.S.N.R.

Hamilton County

Buxton, O. C., Webster City (Port Angeles, Wash.) 1st Lt., A.U.S.
Howar, B. F., Jewell (APO 514, New York, N. Y.) Major, A.U.S.
James, D. W., Kamrar (APO 700, New York, N. Y.) .....Capt., A.U.S.
Lewis, W. B., Webster City (APO 763, New York, N. Y.) .....Capt., A.U.S.
Mooney, F. P. Jewell (APO New York, N. Y.)
Paschal, G. A., Williams (Camp Barkeley, Texas)..Capt., A.U.S.
Patterson, R. A., Webster City (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Ptacek, J. L., Webster City (Greenwood, S. Car.).....A.U.S.
Thompson, E. D., Webster City (Biloxi, Miss.)..Capt., A.U.S.

Hancock-Winnebago Counties

Dolmage, G. H., Buffalo Center (Nashville, Tenn.)..Capt., A.U.S.
Dulmes, A. H., Klemme (Brigham City, Utah).....Capt., A.U.S.
Eller, L. W., Kanawha (APO 302, New York, N. Y.).....1st Lt., A.U.S.
Shaw, D. F., Britt (Tucson, Ariz.).....A.U.S.
Thomas, C. W., Forest City (Camp Crowder, Mo.)..Capt., A.U.S.

Hardin County

Burgess, A. W., Iowa Falls (Mare Island, Cal.).....Lt., U.S.N.R.
Houlihan, F. W., Ackley (APO 860, New York, N. Y.).....1st Lt., A.U.S.
Jansonius, J. W., Eldora (APO 4834, New York, N. Y.) .....Capt., A.U.S.
Johnson, R. J., Iowa Falls (Lawton, Okla.).....Capt., A.U.S.
Johnson, W. A., Alden (Pendleton, Ore.)
Shurts, J. J., Eldora (Camp Roberts, Cal.).....1st Lt., A.U.S.
Todd, V. S., Eldora (APO 545, Los Angeles, Cal.)...Capt., A.U.S.

Harrison County

Bergstrom, A. C., Missouri Valley (Ft. Benning, Ga.)....A.U.S.
Burbridge, G. E., Logan (Ft. Benning, Ga.).....Major, A.U.S.
Byrnes, C. W., Dunlap (Jefferson Barracks, Mo.)
Heise, C. A., Jr., Missouri Valley
Tamisiea, F. X., Missouri Valley (Jefferson Barracks, Mo.) .....1st Lt., A.U.S.

Henry County

Brown, W. B., Mount Pleasant (APO 29, New York, N. Y.) .....Major, A.U.S.
Cogan, Samuel, Mt. Pleasant.....A.U.S.
Dwankowski, Carl, Mt. Pleasant (Carlisle Barracks, Pa.) .....1st Lt., A.U.S.
Gloeckler, B. B., Mount Pleasant (Laurel, Md.).....Capt., A.U.S.
Hartley, B. D., Mount Pleasant (Yuma, Ariz.)....Capt., A.U.S.
Megorden, W. H., Mount Pleasant (Ogden, Utah) 1st Lt., A.U.S.
Ristine, L. P., Mount Pleasant (Sioux Falls, S. Dak.) .....Major, A.U.S.

Howard County

Buresh, Abner, Lime Springs (San Diego, Cal.)
Nierling, P. A., Cresco (APO 261, Los Angeles, Cal.) Capt., A.U.S.

Humboldt County

Arent, A. S., Humboldt (Stockton, Cal.).....Capt., A.U.S.
Coddington, J. H., Humboldt (Fresno, Cal.).....1st Lt., A.U.S.

Ida County

Dressler, J. B., Ida Grove (APO 4713, San Francisco, Cal.) .....Capt., A.U.S.
Harris, H. H., Battle Creek (Omaha, Neb.)....1st Lt., A.U.S.
Martin, J. W., Holstein (Montgomery, Ala.).....Capt., A.U.S.

Iowa County

McDaniel, J. D., Marengo (Fort Clark, Texas).....Capt., A.U.S.
Miller, D. F., Williamsburg (Seattle, Wash.).....Lt., U.S.N.R.

Jackson County

Swift, F. J., Jr., Maquoketa (Camp Atterbury, Ind.) Major, A.U.S.

Jasper County

Doake, Clarke, Newton.....1st Lt., A.U.S.
Minkel, R. M., Newton (APO New York, N. Y.) 1st Lt., A.U.S.
Ritchey, S. J., Newton.....Major, A.U.S.

Jefferson County

Castell, J. W., Fairfield (Fort Devens, Mass.).....Capt., A.U.S.
Gittler, Ludwig, Fairfield (APO 1001, New York, N. Y.) .....Major, A.U.S.
Graber H. E., Fairfield (Carlisle Barracks, Penn.) Major, A.U.S.
Taylor, I. C., Fairfield (Washington, D. C.)....1st Lt., A.U.S.

Johnson County

Agnew, J. W., Iowa City (Camp Phillips, Kan.)..1st Lt., A.U.S.
Allen, J. H., Iowa City (Scott Field, Ill.).....Capt., A.U.S.
Anderson, E. N., Iowa City (Clinton, Iowa).....Major, A.U.S.
Boiler, W. F., Iowa City (Fort Leonard Wood, Mo.) .....Major, A.U.S.
Boyd, E. J., Iowa City (Colorado Springs, Colo.).1st Lt., A.U.S.
Brinkhous, K. M., Iowa City (APO 4672, San Francisco, Cal.) .....Lt. Col., A.U.S.
Bunge, R. G., Iowa City (Biloxi, Miss.).....1st Lt., A.U.S.
Callahan, G. D., Iowa City (El Toro, Cal.).....Lt., U.S.N.R.
Cooper, W. K., Iowa City (Jefferson Barracks, Mo.) Capt., A.U.S.
Crowell, E. A., Iowa City (Spokane, Wash.)..1st Lt., A.U.S.
Diddle, A. W., Iowa City (Key West, Fla.)..Lt. (jg), U.S.N.R.
Dorner, R. A., Iowa City (APO 534, New York, N. Y.) .....Capt., A.U.S.
Elmquist, H. S., Iowa City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Emmons, H. S., Iowa City (Abilene, Texas).....1st Lt., A.U.S.

Flynn, J. E., Iowa City (Hot Springs, Ark.).....A.U.S.
Fourt, A. S., Iowa City (APO 1001, New York, N. Y.).....Col., A.U.S.
Francis, N. L., Iowa City (Annapolis, Md.) Lt. (jg), U.S.N.R.
Galinsky, L. J., Oakdale (Camp Crowder, Mo.).....Capt., A.U.S.
Garlinghouse, R. O., Iowa City (Fort Snelling, Minn.)..A.U.S.
Hardin, R. C., Iowa City (APO 1001, New York, N. Y.)....A.U.S.
Hartung, Walter, Iowa City (Camp Carson, Colo.)..Capt., A.U.S.
Hessin, A. L., Iowa City.....1st Lt., A.U.S.
Irwin, R. L., Iowa City (Iowa City, Iowa)..Lt. Comdr., U.S.N.R.
January, L. E., Iowa City (Moses Lake, Wash.)....Capt., A.U.S.
Keislar, H. D., Iowa City (Camp Barkeley, Tex.)..1st Lt., A.U.S.
Lage, R. H., Iowa City (Santa Barbara, Cal.).....Lt., U.S.N.R.
Longwell, F. H., Iowa City (APO 505, New York, N. Y.).....Capt., A.U.S.
Nagyfy, S. F., Iowa City (Memphis, Tenn.)...Lt. (jg), U.S.N.R.
Newman, R. W., Iowa City (Fleet PO, New York, N. Y.).....Lt., U.S.N.R.
Parkin, G. L., Iowa City (Carlisle Barracks, Pa.)..1st Lt., A.U.S.
Paulus, E. W., Iowa City (APO 1001, New York, N. Y.).....Lt. Col., A.U.S.
Petersen, V. W., Iowa City (APO 1001, New York, N. Y.).....Col., A.U.S.
Sells, R. L., Jr., Iowa City (Hamilton Field, Cal.).1st Lt., A.U.S.
Smith, H. F., Iowa City (Great Lakes, Ill.).Lt. Comdr., U.S.N.R.
Springer, E. W., Iowa City (APO 622, Miami, Fla.).1st Lt., A.U.S.
Stadler, H. E., Iowa City (Washington, D. C.)....1st Lt., A.U.S.
Staggs, W. A., Iowa City (Camp Robinson, Ark.)..1st Lt., A.U.S.
Stephens, R. L., Iowa City (Orlando, Fla.).....Capt., A.U.S.
Stump, R. B., Iowa City (Fort Leonard Wood, Mo.)..A.U.S.
Titus, E. L., Iowa City (Fort Banks, Mass.).....Col., A.U.S.
Vest, W. M., Iowa City (APO 928, San Francisco, Cal.).....Capt., A.U.S.
Ward, R. H., Iowa City (Iowa City, Iowa).....U.S.N.R.
Ziffren, S. E., Iowa City (Springfield, Mo.).....1st Lt., A.U.S.

Junior Members

Adams, M. P., Iowa City
Ahrens, J. H., Iowa City (APO San Francisco, Cal.).....A.U.S.
Ball, A. L., Iowa City (Camp Polk, La.).....Major, A.U.S.
Barrent, M. E., Iowa City (Camp Tyson, Tenn.)..Capt., A.U.S.
Black, N. M., Iowa City (McChord Field, Wash.) 1st Lt., A.U.S.
Blair, J. D., Iowa City (APO San Francisco, Cal.).Major, A.U.S.
Boyd, R. J., Iowa City (Spokane, Wash.).....Capt., A.U.S.
Brintnall, E. S., Iowa City (Colorado Springs, Colo.).....1st Lt., A.U.S.
Burr, S. P., Iowa City (APO San Francisco, Cal.).1st Lt., A.U.S.
Connole J. F., Iowa City (Camp Bowie, Texas)..1st Lt., A.U.S.
Couch, O. A., Iowa City (Camp Van Dorn, Miss.)..1st Lt., A.U.S.
Decker, C. E., Iowa City (Oklahoma City, Okla.)..1st Lt., A.U.S.
Donnelly B. A., Iowa City (APO San Francisco, Cal.).....1st Lt., A.U.S.
Ehrenhaft, J. L., Iowa City (March Field, Cal.)..1st Lt., A.U.S.
Englerth, F. L., Iowa City (APO San Francisco, Cal.).....Capt., A.U.S.
Freiberg, M., Iowa City (Jefferson Barracks, Mo.).....A.U.S.
Glassman A. L., Iowa City (Palm Springs, Cal.) 1st Lt., A.U.S.
Gilliland, C. H., Iowa City (Great Lakes, Ill.) Lt. (jg), U.S.N.R.
Hamilton, H. E., Iowa City (Chicago, Ill.).....1st Lt., A.U.S.
Harms, G. E., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Hendricks, A. B., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Hovis, Wm., Iowa City (San Diego, Cal.).....Lt. (jg), U.S.N.R.
Ide, L. W., Iowa City (Fort Warren, Wyo.).....1st Lt., A.U.S.
Jacobs, C. A., Iowa City (APO New York, N. Y.).Major, A.U.S.
Kaplan, Nathan, Iowa City (Carlisle Barracks, Pa.).....1st Lt., A.U.S.
Keil, P. G., Iowa City (Sioux City, Iowa).....1st Lt., A.U.S.
Kelberg, M. R., Iowa City (Treasure Island, Cal.).....Lt. (jg), U.S.N.R
Keleher, M. F., Iowa City (Great Lakes, Ill.)..Lt. (jg), U.S.N.R.
Keohen, G. F., Iowa City (Camp Grant, Ill.)....Capt., A.U.S.
Kugler, F. E., Iowa City (Fort Warren, Wyo.)....Capt., A.U.S.
Lowry, F. C., Iowa City (Sioux Falls, S. D.)....1st Lt., A.U.S.
McCann, J. P., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
McQuiston, W. O., Iowa City (Chicago, Ill.)....1st Lt., A.U.S.
Moen, B. H., Iowa City
Moon, R. E., Iowa City (Camp Bowie, Texas)....1st Lt., A.U.S.
Odell, Lester, Iowa City (Alameda, Cal.).....Lt. (jg), U.S.N.R.
Phillips, R. M., Iowa City (San Francisco, Cal.) 1st Lt., A.U.S.
Pulliam, R. L., Iowa City (Portland, Ore.).....Major, A.U.S.
Randall, C. G., Iowa City
Randall, R. G., Iowa City (Waterloo, Iowa).....Capt. A.U.S.
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.).....1st Lt., A.U.S.
Russin, L. A., Iowa City (Fort Blanding, Fla.)....Capt., A.U.S.
Saar, J. L., Iowa City (APO New York, N. Y.)..Capt., A.U.S
Sawtelle, W. W., Iowa City
Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Shand, J. A., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Shapiro, S. I., Iowa City
Simpson, F. E., Iowa City (Camp Grant, Ill.).....A.U.S
Skewis, J. E., Iowa City (Rochester, N. Y.)..Lt. (jg), U.S.N.R.
Skouge, O. T., Iowa City
Towle, R. A., Iowa City (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Warren, R. F., Iowa City (Santa Barbara, Cal.).....A.U.S.
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.).....1st Lt., A.U.S.
Wicks, W. J., Iowa City (Camp Crowder, Mo.)....Capt., A.U.S.
Williams, L. A., Iowa City (Treasure Island, Cal.).1st Lt., A.U.S.
Willumsen, H. C., Iowa City (Chico, Cal.).....Capt., A.U.S.
Wolkin, J., Iowa City (San Antonio, Texas)....Capt., A.U.S.
Yetter, W. L., Iowa City (APO New York, N. Y.) Capt., A.U.S.
Zahrt, N. E., Iowa City (Miami Beach, Fla.)....1st Lt., A.U.S.
Zimmerman, H. A., Iowa City (Santa Ana, Cal.)..1st Lt., A.U.S.

Keokuk County

Bjork, Floyd, Keota (Camp Barkeley, Texas).....A.U.S.
Doyle, J. L., Sigourney (Camp Barkeley, Texas).....A.U.S.
Engelmann, A. T., What Cheer (Camp Polk, La.) Capt., A.U.S.
Graham, J. A., Gibson (Needles, Cal.).....1st Lt., A.U.S.
Montgomery, G. E., Keota (Fort Sam Houston, Texas)....A.U.S.
Wiley, Dudley, Hedrick (Mason City, Wash.)

Kossuth County

Clapsaddle, D. W., Burt (Ft. Benning, Ga.).....1st Lt., A.U.S.
Williams, R. L., Lakota (San Francisco, Cal.).....Lt. Comdr., U.S.N.R.

Lee County

Ashline, G. H., Keokuk (APO 253, New York, N. Y.) Capt., A.U.S.
Cleary, H. G., Fort Madison (APO 726, Seattle, Wash.).....Capt., A.U.S.
Cooper. R. F., Keokuk (Fort Leonard Wood, Mo.)
Johnstone, A. A., Keokuk (Camp Robinson, Ark.)....Col., A.U.S.
McKee, T. L., Keokuk (APO 922, San Francisco, Cal.).....Major, A.U.S.
Pumphrey, L. C., Keokuk (Ft. Leonard Wood, Mo.).....Major, A.U.S.
Rankin, J. R., Keokuk (Davenport, Iowa).....Lt., U.S.N.R.
Steffey, F. L., Keokuk (Fort Snelling, Minn.)
Van Werden, B. D., Keokuk (APO 4777, New York, N. Y.).....Capt., A.U.S.

Linn County

Andre, G. R., Lisbon (APO 90, Los Angeles, Cal.)...Major, A.U.S.
Berney, P. W., Cedar Rapids (San Francisco, Cal.) Capt., A.U.S.
Block, W. M., Cedar Rapids (APO 4759, San Francisco, Cal.).....1st Lt., A.U.S.
Chapman, R. M., Cedar Rapids (Chicago, Ill.).....Capt., A.U.S.
Coughlan, V. H., Coggon (Fort Snelling, Minn.).....A.U.S.
Courter, W. O., Springville (APO 464, New York, N. Y.).....Capt., A.U.S.
Crew. P. I., Marion (Monroe, La.).....Capt., A.U.S.
Dunn. F. C., Cedar Rapids (Chicago, Ill.).....Capt., A.U.S.
Halpin, L. J., Cedar Rapids (Atlanta, Ga.)....Major, A.U.S.
Hecker J. T., Cedar Rapids (Pecos, Texas).....1st Lt., A.U.S.
Jirsa, H. O., Cedar Rapids (APO 871, New York, N. Y.).....Major, A.U.S.
Keith, J. J., Marion (APO 502, San Francisco, Cal.).....Major, A.U.S.
Kieck, E. G., Cedar Rapids (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R
Kruckenberg, W. G., Mount Vernon (Rochester Minn.).....Lt., U.S.N.R.
Locher, R. C., Cedar Rapids (Merced, Cal.).....Major, A.U.S.
MacDougal, R. F., Cedar Rapids (Carlisle Barracks, Pa.).....Capt., A.U.S.
McConkie, E. B., Cedar Rapids (Sioux Falls, S. Dak.).....Major, A.U.S.
McQuiston, J. S., Cedar Rapids (Salina, Kan.)..Major, A.U.S.
Meffert, C. B., Cedar Rapids (Camp Carson, Colo.)..Major, A.U.S.
Netolicky, R. Y., Cedar Rapids (San Francisco, Cal.).Lt., U.S.N.R.
Noble, W. C., Cedar Rapids (Camp San Luis Obispo, Cal.).....1st Lt., A.U.S.
Noe, C. A., Cedar Rapids (Hot Springs, Ark.)..Major, A.U.S.
Parke, John, Cedar Rapids (APO 34, New York, N. Y.).....Capt., A.U.S.
Proctor, R. D., Cedar Rapids (Corpus Christi, Texas).....Lt. Comdr., U.S.N.R.
Redmond, J. J., Cedar Rapids (APO 813, New York, N. Y.).....Major, A.U.S.
Rieniets, J. H., Cedar Rapids (Fleet PO, San Francisco, Cal.).....Lt. Comdr, U.S.N.R.
Sedlacek, L. B., Cedar Rapids (Camp Shelby, Miss.).....Lt. Col., A.U.S.
Smrha, J. A., Cedar Rapids (APO 4665, San Francisco, Cal.).....Capt., A.U.S.
Stark, C. H., Cedar Rapids (Denver, Colo.).....Capt., A.U.S.
Sulek, A. E., Cedar Rapids (APO, 957, San Francisco, Cal.).....Major, A.U.S
Woodhouse, K. W., Cedar Rapids (APO 34, New York, N. Y.).....Lt. Col., A.U.S.
Wray, R. M., Cedar Rapids (APO 958, San Francisco, Cal.).....Major, A.U.S.
Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.

Louisa County

DeYarman, K. T., Morning Sun (San Antonio, Texas).....1st Lt., A.U.S.
Tandy, R. W., Morning Sun (Norfolk, Va.)..Lt. Comdr., U.S.N.R.

Lucas County

Lister, K. E., Chariton (Fort Snelling, Minn.)

Lyon County

Cook, S. H., Rock Rapids (Memphis, Tenn.).....Capt., A.U.S.
‡Corcoran, T. E., Rock Rapids (APO New York) N. Y.).....Capt. A.U.S.
Moriarty, J. F., Rock Rapids (APO 700, New York, N. Y.).....Capt. A.U.S.

Madison County

Boden, H. N., Truro (Fresno, Cal.)
Chesnut, P. F., Winterset (Portland. Ore.).....1st Lt., A.U.S.
Wicks, R. L., Winterset (APO, New York, N. Y.).Lt. Col., A.U.S.

Veltman, J. F., Winterset (APO 957, San Francisco, Cal.) .....Capt., A.U.S.

Mahaska County

Bennett, G. W., Oskaloosa (Fort Riley, Kan.)..Major, A.U.S.
Bos, H. C., Oskaloosa.....Major, A.U.S.
Campbell, W. V., Oskaloosa (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Clark, G. H., Oskaloosa (Norman, Okla.)..Lt. Comdr., U.S.N.R.
Greenlee, M. R., Oskaloosa (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Lemon, K.M., Oskaloosa.....1st Lt., A.U.S.
Zager, L. L., Oskaloosa (Camp Rucker, Ala.).....1st Lt., A.U.S.

Marion County

Elliott, V. J., Knoxville (Portland, Ore.).....Capt., A.U.S.
Mater, D. A., Knoxville (Lincoln, Neb.).....Major, A.U.S.
Ralston, F. P., Knoxville (Indio, Cal.).....Capt., A.U.S.
Schiek, C. M., Knoxville.....Lt. Comdr., U.S.N.R.
Schroeder, M. C., Pella (Camp Uhlan, Texas)....1st Lt., A.U.S.
Williams, D. B., Knoxville.....Capt. A.U.S.

Marshall County

Carpenter, R. C., Marshalltown (APO New York, N. Y.) .....Capt., A.U.S.
Marble, E. J., Marshalltown (San Diego, Cal.)....Lt., U.S.N.R.
Marble, W. P., Marshalltown (Walla Walla, Wash.) Capt., A.U.S.
Meyer, M. G., Marshalltown (Fort Ethan Allen, Vt.) Major, A.U.S.
Noonan, J. J., Marshalltown (San Diego, Cal.)..Major, A.U.S.
Phelps, R. E., State Center (APO 730, Seattle, Wash.) Capt., A.U.S.
Sinning, J. E., Melbourne (Camp Robinson, Ark.)..Capt., A.U.S.
Smith, E. M., State Center (Sioux City, Ia.).....Lt. Col., A.U.S.
Stegman, J. J., Marshalltown (Portland, Ore.)..Capt., A.U.S.
Wells, R. C., Marshalltown (Gowen Field, Idaho) 1st Lt., A.U.S.
Wolfe, O. D., Marshalltown (Fort Riley, Kan.)..Capt., A.U.S.
Wolfe, R. M., Marshalltown (Cherry Point, N. C.) .....Lt., U.S.N.R.

Mills County

DeYoung, W. A., Glenwood (APO 513, New York, N. Y.) .....Capt., A.U.S.
Magaret, E. C., Glenwood (Lubbock, Texas)....1st Lt., A.U.S
Shonka, T. E., Malvern (Camp Pickett, Va.).....Capt., A.U.S.

Mitchell County

Culbertson, R. A., St. Ansgar (Fort Knox, Ky.)...Lt. Col., A.U.S.
Moore, E. E., Osage (Camp Mackall, N. C.).....Major, A.U.S.
Owen, William, Osage (San Diego, Cal.).....Lt. (jg), U.S.N.R.
Walker, T. G., Riceville (Minneapolis, Minn.).....Lt., U.S.N.R.

Monona County

Almer, L. E., Moorhead (Fort Knox, Ky.).....A.U.S.
Anderson, S. N., Onawa (Corpus Christi, Tex.)....Lt., U.S.N.R.
Ganzhorn, H. L., Mapleton (APO 4759, San Francisco, Cal.) .....1st Lt., A.U.S.
Gaukel, L. A., Onawa (APO 937, Seattle, Wash.)..1st Lt., A.U.S.
†Harlan, M. E., Onawa (care PM, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Stauch, M. O.. Whiting (Fort Rosecrans, Cal.).....A.U.S.
Wainwright, M. T., Mapleton (APO 939, Seattle, Wash.)..A.U.S.
Wolpert, P. L., Onawa (Rochester, Minn.).....1st Lt., A.U.S.

Monroe County

Heimann, V. R., Albia (Camp Maxey, Texas).....Capt., A.U.S.
Richter, H. J., Albia (Waco, Texas).....Capt., A.U.S.
Smith, R. A., Albia (San Antonio, Texas).....1st Lt., A.U.S.

Montgomery County

Bastron, H. C., Red Oak (APO 525, New York, N. Y.) .....Major, A.U.S.
Hansen, F. A., Red Oak (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Moriarty, L. R., Villisca (APO 944, Seattle, Wash.). Capt., A.U.S.
Nelson, C. C., Red Oak (San Diego, Cal.).....Lt., U.S.N.R.
Panzer, E. J. C., Stanton (San Diego, Cal.)....Lt. (jg), U.S.N.R.
Sorensen, E. M., Red Oak (Jefferson Barracks, Mo.)..... .....1st Lt., A.U.S

Muscatine County

Ady, A. E., West Liberty (care PM, San Francisco, Cal.)U.S.N.R.
Asthalter, R. W., Muscatine (Fort Meade, Md.)..1st Lt., A.U.S.
Carlson, E. H., Muscatine (Kalamazoo, Mich.)....Capt., A.U.S.
Goad, R. R., Muscatine (Washington, D. C.) Lt. Comdr., U.S.N.R.
Kimball, J. E., Jr., West Liberty (APO Miami, Fla.)
Lindley, E. L., Muscatine (APO Los Angeles, Cal.).Capt., A.U.S.
Muhs, E. O., Muscatine (APO 4578, New York, N. Y.) .....Capt., A.U.S.
Norem, Walter, Muscatine (APO Miami, Fla.)....Capt., A.U.S.
Robertson, T. A., West Liberty (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Sywassink, G. A., Muscatine (Camp Campbell, Ky.)Major, A.U.S.
Whitmer, L. H., Wilton Junction (Fort Sill, Okla.).Major, A.U.S.

O'Brien County

Getty, E. B., Primghar (Camp Swift, Texas).....Capt., A.U.S.
Hayne, W. W., Paullina (APO New York, N. Y.)..1st Lt., A.U.S.
Moen, S. T., Hartley (APO 3492, New York, N. Y.).Major, A.U.S.
Myers, K. W., Sheldon (Watertown, S. Dak.)..1st Lt., A.U.S.

Osceola County

Kuntz, G. S., Sibley (APO 34, New York, N. Y.)

Page County

Barnes, C. A., Shenandoah (Fort Bragg, N. C.)....Capt., A.U.S.
Blackman, Nathan, Clarinda (Ft. Leavenworth, Kan.) .....Capt., A.U.S.
Bossingham, E. N., Clarinda (APO 923, San Francisco, Cal.) .....Capt., A.U.S.
Bunch, H. Mck., Shenandoah (Farragut, Idaho) .....Lt. Comdr., U.S.N.R.
‡Burdick, F. D., Shenandoah (APO, New York, N. Y.) .....Capt., A.U.S.
Burnett, F. K., Clarinda (APO 4713, San Francisco, Cal.) .....Major, A.U.S.
Little, E. B., Shenandoah.....1st Lt., A.U.S.
Rausch, G. R., Clarinda (Wendover Field, Utah) 1st Lt., A.U.S.
Savage, L. W., Shenandoah (Fort Meade, Md.)..1st Lt., A.U.S.

Palo Alto County

Davey, W. P., Emmetsburg (San Diego, Cal.) Lt. (jg), U.S.N.R.

Plymouth County

Bowers, C. V., LeMars (APO New York, N. Y.)..1st. Lt., A.U.S.
Fisch, R. J., LeMars (Carlisle Barracks, Pa.)....1st Lt., A.U.S.
Foss, R. H., Remsen (Salt Lake City, Utah)..1st Lt., A.U.S.
Wolfson, Harold, Kingsley (Fort Lewis, Wash.)....Capt., A.U.S.

Pocahontas County

Blair, F. L., Jr., Fonda.....1st Lt., A.U.S.
Herrick, T. G., Gilmore City (Los Angeles, Cal.)...Capt., A.U.S.
Larson, J. B., Laurens (APO 7233, San Francisco, Cal.) .....Capt., A.U.S.
Leserman, L. K., Rolfe (APO 502, San Francisco, Cal.) .....Capt., A.U.S.

Polk County

Abbott, W. D., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.
Anderson, N. B., Des Moines (APO 521, New York, N. Y.) .....Lt. Col., A.U.S.
Angell, C. A., Des Moines (Camp Maxey, Texas)....Capt., A.U.S.
Anspach, R. S., Mitchellville (APO 528, New York, N. Y.) .....Lt. Col., A.U.S.
Barner, J. L., Des Moines (Atlanta, Ga.)....Major, A.U.S.
Barnes, B. C., Des Moines (Ogden, Utah).....Capt., A.U.S.
Bates, M. T., Des Moines (Fleet PO, New York, N. Y.) .....Lt. Comdr., U.S.N.R.
Bender, H. R., Des Moines (Carlisle Barracks, Penn) .....1st Lt., A.U.S.
Bond, T. A., Des Moines (Rochester, Minn.)....Lt. (jg), U.S.N.R.
Bone, H. C., Des Moines (Arlington, Cal.).....Capt., A.U.S.
Brown, A. W., Des Moines (Fort Leavenworth, Kan.) .....Major, A.U.S.
Bruner, J. M., Des Moines (Fort Bliss, Texas)....Major, A.U.S.
Bruns, P. D., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
‡Burgeson, F. M., Des Moines (Gefangenennummer 1480, Lager-Bezeichnung: Kriegsgef-Offizierlager XXI B, Deutschland [Allemagne]).....Capt., A.U.S.
Caldwell, J. W., Des Moines (Vulcan, Alberta, Canada) .....Flight Lt., R.C.A.F.
Chambers, J. W., Des Moines (Concordia, Kan.)....1st Lt., A.U.S.
Chase, W. B., Jr., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Clark, G. E., Jr., Des Moines (Randolph Field, Texas) .....1st Lt., A.U.S.
Connell, J. R., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Corn, H. H., Des Moines (St. Louis, Mo.).....1st Lt., A.U.S.
Coughlan, D. W., Des Moines (APO New York, N. Y.).....Capt., A.U.S.
Crowley, D. F., Jr., Des Moines (APO New York, N. Y.) .....Capt., A.U.S.
Crowley, F. A., Des Moines (APO New York, N Y.) .....1st Lt., A.U.S.
DeCicco, Ralph, Des Moines (APO Los Angeles, Cal.) .....Capt., A.U.S.
Decker, H. G., Des Moines (Long Beach, Cal.) .....Lt. Comdr., U.S.N.R.
Downing, A. H., Des Moines (Fort Snelling, Minn.) 1st Lt., A.U.S.
Dushkin, M. A., Des Moines (APO 628, New York, N. Y.) .....Major, A.U.S.
Elliott, O. A., Des Moines (Pecos, Texas).....Capt., A.U.S.
Ellis, H. G., Des Moines (Kearney, Nebr.).....Capt., A.U.S.
Ervin, L. J., Des Moines (Lubbock, Texas).....Major, A.U.S.
Fried, David, Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
Fracasse, John, Des Moines.. .....1st Lt., A.U.S.
George, E. M., Des Moines (Norfolk, Va.).Lt. Comdr., U.S.N.R.
Gerchek, E. W., Des Moines
Gibson, D. N., Des Moines (Utica, N. Y.).....Major, A.U.S.
Glomset, D. A., Des Moines (Carlisle Barracks, Pa.) .....1st Lt., A.U.S.
Goldberg, Louie, Des Moines (Gulfport, Miss.).....1st Lt., A.U.S.
Gordon, A. M., Des Moines (APO 763, New York N. Y.) .....Capt., A.U.S.
Graeber, F. O., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Greek, L. M., Des Moines (Camp Crowder, Mo.)..1st Lt., A.U.S.
Gurau, H. H., Des Moines (Santa Ana, Cal.).....1st Lt., A.U.S.
Haines, D. J., Des Moines (APO 7115, San Francisco, Cal.) .....Capt., A.U.S.
Harris, D. D., Des Moines (Fleet PO, San Francisco, Cal.) .....Lt. (jg), U.S.N.R.
Harris, H. L., Des Moines.....1st Lt., A.U.S.
Hess, John, Jr., Des Moines (Carlisle Barracks, Penn.) .....1st Lt., A.U.S.
James, A D., Des Moines (Fleet PO, San Francisco, Cal.) .....Comdr., U.S.N.R.
Johnston, C. H., Des Moines (APO 639, New York, N. Y.) .....Lt. Col., A.U.S.
Kast. D. H., Des Moines (Fort Stevens, Ore.).....Capt., A.U.S.
Kelley, E. J., Des Moines (Marshall, Mo.)....Lt. Comdr., U.S.N.R.

Kelly, D. H., Des Moines (Denver, Colo.).....Lt. Col., A.U.S.
Klocksiem, H. L., Des Moines.....Lt. (jg), U.S.N.R.
Kottke, E. E., Des Moines (Temple, Texas).....Capt., A.U.S.
Landis, S. N., Des Moines (West Palm Beach, Fla.).....1st Lt., A.U.S.
La Tona, Salvatore, Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Lederman, James, Des Moines.....1st Lt., R.C.A.
Lehman, E. W., Des Moines (Memphis, Tenn.)....Major, A.U.S.
Losh, C. W., Jr., Des Moines (Jackson, Miss.).....1st Lt., A.U.S.
Lovejoy, E. P., Des Moines (Mare Island, Cal.).....Lt. Comdr., U.S.N.R.
Maloney, P. J., Des Moines (Fort Lewis, Wash.)...1st Lt., A.U.S.
Marquis, G. S., Des Moines (Chicago, Ill.)..Lt. Comdr., U.S.N.R.
Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.
Mauritz, E. L., Des Moines (APO 763, New York, N. Y.).....Capt., A.U.S.
McCoy, H. J., Des Moines (Iowa City, Iowa)...Comdr., U.S.N.R.
McDonald, D. J., Des Moines (March Field, Cal.).Capt., A.U.S.
McNamee, J. H., Des Moines (Oakland, Cal.).....Lt. Comdr., U.S.N.R.
Mencher, E. W., Des Moines.....1st Lt., A.U.S.
Merkel, B. M., Des Moines (APO 520, New York, N. Y.).....Major, A.U.S.
Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.).....Capt., A.U.S.
Morden, R. P., Des Moines (APO 4570, New York, N. Y.).....1st Lt., A.U.S.
Murphy, J. H., Des Moines (San Diego, Cal.).....Lt., U.S.N.R.
Nelson, A. L., Des Moines (Camp Livingston, La.) Capt., A.U.S.
Noun, L. J., Des Moines (Fleet PO, New York, N. Y.).....Lt. (jg), U.S.N.R.
Noun, M. H., Des Moines (APO 871, New York, N. Y.).....Major, A.U.S.
Nourse, M. H., Des Moines (Bethesda, Md.)..Lt. (jg), U.S.N.R.
Patton, B. W., Des Moines (Camp Robinson, Ark.).....1st Lt., A.U.S.
Pearlman, L. R., Des Moines (APO 980, Seattle, Wash.).....Major, A.U.S.
Peisen, C. J., Des Moines (Camp Perry, Ohio)..1st Lt., A.U.S.
Penn, E. C., West Des Moines (Spokane, Wash.).....1st Lt., A.U.S.
Pfeiffer, E. P., Des Moines (Springfield, Mo.)....Capt., A.U.S.
Phillips, A. B., Des Moines (Corpus Christi, Texas).....Lt., U.S.N.R.
Porter, R. J., Des Moines (Kearney, Nebr.).....Capt., A.U.S.
Powell, L. D., Des Moines (Long Beach, Cal.)....Capt., U.S.N.R.
Pratt, E. B., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Priestley, J. B., Des Moines (Camp Phillips, Kan.)..Major, A.U.S.
Purdy, W. O., Des Moines (Camp Howze, Texas)..Capt., A.U.S.
Riegelman, R. H., Des Moines (APO 634, New York, N. Y.).....Major, A.U.S.
Robinson, V. C., Des Moines (Tampa, Fla.)....Capt., A.U.S.
Rotkow, M. J., Des Moines (Louisville, Ky.)....1st Lt., A.U.S.
Schaeferle, M. J., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Schlaser, V. L., Des Moines (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.
Shepherd, L. K., Des Moines (APO New York, N. Y.).....1st Lt., A.U.S.
Shifler, H. K., Des Moines (APO New York, N. Y.).Capt., A.U.S.
Singer, P. L., Des Moines (Camp Grant, Ill.)..1st Lt., A.U.S.
Skultety, J. A., Des Moines (Brownsville, Texas).....1st Lt., U.S.P.H.S.
Smead, H. H., Des Moines (Dover, Del.).....Capt., A.U.S.
Smith, H. J., Des Moines (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.
Smith, R. T., Des Moines (Meridian, Miss.)....1st Lt., A.U.S.
Snodgrass, R. W., Des Moines (Fort Rosecrans, Cal.).....Capt., A.U.S.
Snyder, G. E., Grimes (Sheppard Field, Tex.) .....Major, A.U.S.
Sohm, H. A., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.
Sorensen, R. M., Des Moines (Topeka, Kan.).Major, U.S.P.H.S.
Springer, F. A., Des Moines (Treasure Island, Cal.).....Lt. Comdr., U.S.N.R.
Stearns, A. B., Des Moines (Denver, Colo.)..Major, A.U.S.
Stickler, Robert, Des Moines (Fort Benning, Ga.)..Capt., A.U.S.
Stitt, P. L., Des Moines (Seattle, Wash.)....Lt. (jg), U.S.N.R.
Throckmorton, J. F., Des Moines (Camp Howze, Texas).....Capt. A.U.S.
Toubes, A. A., Des Moines (Leland, Miss.).....1st Lt., A.U.S.
Turner, H. V., Des Moines (Camp Fannin, Texas)..1st Lt., A.U.S.
Updegraff, Thomas, Des Moines (Spokane, Wash.).1st Lt., A.U.S.
Van Hale, L. A., Des Moines (Transfer, Penn.)....1st Lt., A.U.S.
Vaubel, E. K., Des Moines (Silver Spring, Md.).....Capt., A.U.S.
Wagner, E. C., Des Moines (Washington, D. C.)..1st Lt., A.U.S.
Willett, W. M., Des Moines (Fort Bragg, N. C.)..1st Lt., A.U.S.
Wirtz, D. C., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.
Zarchy, A. C., Des Moines (Camp Cook, Cal.).....Capt., A.U.S.

Pottawattamie County

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Cogley, J. P., Council Bluffs (APO 4672, San Francisco, Cal.).....Major, A.U.S.
Collins, R. M., Council Bluffs (San Diego, Cal.)....Lt., U.S.N.R.
Dean, A. M., Council Bluffs (Pensacola, Fla.).....Lt. Comdr., U.S.N.R.
Edwards, C. V., Council Bluffs (Olathe, Kan.).....Lt. Comdr., U.S.N.R.
Hennessy, J. D., Council Bluffs (Chicago, Ill.)..Lt., U.S.N.R.
Jensen, A. L., Council Bluffs (APO 952, San Francisco, Cal.).....Lt. Col., A.U.S.
Klok, G. J., Council Bluffs (Fleet PO, San Diego, Cal.).....Lt., U.S.N.R.
Kurth, C. J., Council Bluffs (Camp Crowder, Mo.)..Capt., A.U.S.
Limbert, E. M., Council Bluffs (Camp Crowder, Mo.).....Capt., A.U.S.
Maiden, S. D., Council Bluffs (Longview, Tex.).....Major, A.U.S.
Martin, L. R., Council Bluffs (Durham, N. C.).....Capt., A.U.S.
Moskovitz, J. M., Council Bluffs (Camp Lockett Cal.).....Capt., A.U.S.
Sternbill, Isaac, Council Bluffs (APO 3552, Seattle, Wash.).....Capt., A.U.S.
Tinley, R. E., Council Bluffs (APO 34, New York, N. Y.).....Capt., A.U.S.
Treynor, J. V., Council Bluffs (Rochester, Minn.).....Lt. Comdr., U.S.N.R.
West, A. G., Council Bluffs (Carlisle Barracks, Pa.).....1st Lt., A.U.S.
Wieseler, R. J., Avoca (McChord Field, Wash.).....A.U.S.
Wurl, O. A., Council Bluffs (APO 871, New York, N. Y.).....Capt., A.U.S.

Poweshiek County

Brobyn, T. E., Grinnell (APO 726, Seattle, Wash.) Major, A.U.S.
Hickerson, L. C., Brooklyn (Santa Ana, Cal.).....1st Lt., A.U.S.
Korfmacher, E. S., Grinnell (San Francisco, Cal.).....Capt., A.U.S.
Niemann, T. V., Brooklyn (APO San Francisco, Cal.).....Capt., A.U.S.
Parish, J. R., Grinnell (Treasure Island, Cal.).....Lt. Comdr., U.S.N.R.

Ringgold County

Seaman, C. L., Mount Ayr (Van Buren, Ark.)..Capt., A.U.S.

Sac County

Bassett, G. H., Sac City (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
Deters, D. C., Schaller (APO 1001, New York, N. Y.).....Capt., A.U.S
Evans, W. I., Sac City (Camp Hood, Texas).....Capt., A.U.S.
Klocksiem, R. G., Odebolt (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Neu, H. N., Sac City (Portland, Ore.).....Major, A.U.S.

Scott County

Baker, R. W., Davenport (Rock Island, Ill.).....Capt., A.U.S.
Balzer, W. J., Davenport (APO 939, Seattle, Wash.) Capt., A.U.S.
Bishop, J. F., Davenport (APO 972, Seattle, Wash.).....Capt., A.U.S.
Block, L. A., Davenport (APO 534, New York, N. Y.).....Major, A.U.S.
Boden, W. C., Davenport (APO 3760, New York, N. Y.).....Capt., A.U.S.
Boyer, U. S., Davenport (Rock Island, Ill.).....Lt. Col., A.U.S.
Brown, D. H., Davenport (Waycross, Ga.).....Capt., A.U.S.
Brown, M. J., Davenport (Camp Hale, Colo.)....Major, A.U.S.
Carey, E. T., Davenport (Fort Andrews, Mass.)..1st Lt., A.U.S.
Christiansen, C. C., Dixon (APO 961, San Francisco, Cal.).....Capt., A.U.S.
Coleman, Tom, Davenport (Camp Stewart, Ga.)...1st Lt., A.U.S.
Cummins, G. M., Jr., Davenport.....1st Lt., A.U.S.
Decker, C. E., Davenport (Oklahoma City, Okla.).....1st Lt., A.U.S.
Evans, H. J., Davenport (St. Petersburg, Fla.).....Capt., A.U.S.
Gibson, P. E., Davenport (Palm Springs, Cal.).....Capt., A.U.S.
Goenne, Wm., Jr., Davenport (Camp White, Ore.)..1st Lt., A.U.S.
Hurevitz, H. M., Davenport (APO 3658, New York, N. Y.).....Capt., A.U.S.
Hurteau, Everett, Davenport (APO 647, New York, N. Y.).....1st Lt., A.U.S.
Hurteau, W. W., Davenport (Camp Barkeley, Texas).....Major, A.U.S.
Kimberly, L. W., Davenport (New Orleans, La.).Capt., A.U.S.
Krakauer, Max, Davenport (Battle Creek, Mich.)..1st Lt., A.U.S.
LaDage, L. H., Davenport (APO 183, Los Angeles, Cal.).....Major, A.U.S.
Lorfeld, G. W., Davenport (Waynesburg, Pa.).....Capt., A.U.S.
Marker, J. I., Davenport (Camp Carson, Colo.)..Col., A.U.S.
McMeans, T. W., Davenport (APO 514, New York, N. Y.).....1st Lt., A.U.S.
Neufeld, R. J., Davenport (Camp Ellis, Ill.).....Capt., A.U.S.
Sheeler, I. H., Davenport (Carlisle Barracks, Pa.)..Capt., A.U.S.
Shorey, J. R., Davenport (Carlisle Barracks, Pa.).Capt., A.U.S.
Smazal, S. F., Davenport (APO 514, New York, N. Y.).....1st Lt., A.U.S.
Soreoson, A. C., Davenport (Oakland, Cal.)..Lt. Comdr., U.S.N.R.
Sunderbruch, J. H., Davenport (Paris, Texas).....Capt., A.U.S.
Weinberg, H. B., Davenport (Fort Benning, Ga.)..Major, A.U.S.
Zukerman, C. M., Bettendorf (Cincinnati, Ohio)....Capt., A.U.S.

Shelby County

Bisgard, C. V., Harlan (Farragut Air Base, Idaho).....Lt. Comdr., U.S.N.R.
Griffith, W. O., Shelby (Camp Davis, N. C.).....A.U.S.
McGowan, J. P., Harlan (San Diego, Cal.)..Lt. Comdr., U.S.N.R.

Sioux County

Gleysteen, R. R., Alton (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.
Grossmann, E. B., Orange City (Fort Sam Houston, Texas).....1st Lt., A.U.S.
Larson, M. O., Hawarden (Camp Bowie, Texas)....Major, A.U.S.
Oelrich, A. M., Hull (Biloxi, Miss.).....1st Lt., A.U.S.
Oelrich, C. D., Sioux Center (Biloxi, Miss.).....1st Lt., A.U.S.

Story County

Conner, J. D., Nevada (APO 7115, San Francisco, Cal.), ...1st Lt., A.U.S
Fellows, J. G., Ames (Ft. Leonard Wood, Mo.).....Capt., A.U.S.
Lekwa, A. H., Story City (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
McFarland, G. E., Jr., Ames (San Pedro, Cal.)....Lt., U.S.N.R.
McFarland, J. E., Ames (Farragut, Idaho)..Lt. Comdr., U.S.N.R.
Rosebrook, L. E., Ames (Del Valle, Texas).....1st Lt., A.U.S.
Sperow, W. B., Nevada (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
Thorburn, O. L., Ames (Alamagordo, N. Mex.).....Major, A.U.S.

Tama County

Bezman, H. S., Traer (Camp Hood, Tex.).....1st Lt., A.U.S.
Boller, G. C., Traer (Camp Bowie, Texas)
Dobias, S. G., Chelsea (APO 937, Seattle, Washington)
Havlik, A. J., Tama (Fleet PO, San Francisco, Cal.).Lt., U.S.N.R.
Schaeferle, L. G., Gladbrook (Fort Leonard Wood, Mo.)
Standefer, J. M., Tama (San Diego, Cal.).....Lt., U.S.N.R.

Taylor County

Hardin, J. F., Bedford (APO 952, San Francisco, Cal.) .....1st Lt., A.U.S.

Union County

Paragas, M. R., Creston (Tampa, Fla.).....Capt., A.U.S.
Ryan, C. J., Creston (Scribner, Neb.).....1st Lt., A.U.S.

Wapello County

Brentan, Emanuel, Ottumwa (APO 252, New York, N. Y.) .....1st Lt., A.U.S
Brody, Sidney, Ottumwa (APO New York, N. Y.)..Major, A.U.S
Gilfillan, C. D. N., Eldon (Battle Creek, Mich.).....Capt., A.U.S.
Hughes, R. O., Ottumwa (Coronado, Cal.)..Lt. Comdr., U.S.N.R.
Moore, G. C., Ottumwa (Carlisle Barracks, Pa.)....1st Lt., A.U.S.
Nelson, F. L., Jr., Ottumwa (APO 4774, New York, N. Y.) .....Capt., A.U.S.
Prewitt, L. H., Ottumwa (March Field, Cal.).....Major, A.U.S.
Selman, R. J., Ottumwa (El Paso, Texas).....Lt. Col., A.U.S.
Struble, G. C., Ottumwa (Fort Harrison, Ind.)....Lt. Col., A.U.S.
Whitehouse, W. N., Ottumwa (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Worley, C. L., Ottumwa (Camp Young, Cal.).....Capt., A.U.S.

Warren County

Fullgrabe E. A., Indianola (Bethesda, Md.) Lt. (jg), U.S.N.R.
Hoffman, G. R., Lacona (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.
Shaw, E. E., Indianola (APO 834, New Orleans, La.) .....Capt., A.U.S.
Trueblood, C. A., Indianola (Camp Campbell, Ky.)..Capt., A.U.S.

Washington County

Boice, C. L., Washington (Atlantic City, N. J.).....Lt., U.S.N.
Droz, A. K., Washington (Grosse Ile, Mich.).Lt. Comdr., U.S.N.R.
Mast, T. M., Washington (Portland, Ore.).....Lt. U.S.N.R.
Stutsman, R. E., Washington (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Ware, S. C., Kalona (Camp McCoy, Wis.).....Capt., A.U.S.

Wayne County

Hyatt, C. N., Jr., Humeston (APO 6, San Francisco, Cal.) .....Capt., A.U.S.

Webster County

Baker, C. J., Fort Dodge (APO New York, N. Y.)...Capt., A.U.S.
Burch, E. S., Dayton (APO 4754, San Francisco, Cal.) .....Capt., A.U.S.
Burleson, M. W., Fort Dodge (Brigham City, Utah) .....1st Lt., A.U.S.
Coughlan, C. H., Fort Dodge (Fort Des Moines, Iowa) .....Major, A.U.S.
Dawson, E. B., Fort Dodge (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Glesne, O. N., Ft. Dodge (New River, N. C.) Lt. Comdr. U.S.N.R.
Joyner, N. M., Fort Dodge (Brooklyn Field, Ala.)
Kluever, H. C., Fort Dodge (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Larsen, H. T., Fort Dodge (Pensacola, Fla.).....Lt., U.S.N.R.
Shrader, J. C., Fort Dodge (APO 181, Los Angeles, Cal.) .....Major, A.U.S.
Thatcher, O. D., Fort Dodge (APO 634, New York, N. Y.) .....Capt., A.U.S.
Thatcher, W. C., Fort Dodge (APO 464, New York, N. Y.) .....Capt., A.U.S.
Van Patten, E. M., Ft. Dodge (Alamogordo, N. M.).1st Lt., A.U.S.

Winneshiek County

Fritchen, A. F., Decorah (APO San Francisco, Cal.) .....Comdr., U.S.N.R.
Hospodarsky, L. J., Ridgeway (Seattle, Wash.)..Capt., A.U.S.
Larson, L. E., Decorah (Farragut, Idaho).....Lt., U.S.N.R.
Svendsen, R. N., Decorah (San Diego, Calif.)..Lt. (jg) U.S.N.R.
Van Besien, G. J., Decorah (APO New York, N. Y.).....1st Lt., A.U.S.

Woodbury County

Bettler, P. L., Sioux City (APO San Francisco, Cal.) .....Major, A.U.S.
Blackstone, M. A., Sioux City (Pittsburg, Cal.).1st Lt., A.U.S.
Boe, Henry, Sioux City (Salina, Kan.).....Capt., A.U.S.
Burroughs, H. H., Sioux City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
‡Cmeyla, P. M., Sioux City (APO San Francisco, Cal.) .....Capt., A.U.S.
Cowan, J. A., Sioux City (Oklahoma City, Okla.) .....Major, U.S.P.H.S.
Crowder, R. E., Sioux City (San Diego, Cal.).Lt. Comdr., U.S.N.R.
Dimsdale, L. J., Sioux City (Clinton, Iowa).....1st Lt., A.U.S.
Down, H. I., Sioux City (Camp Breckenridge, Ky.) Major, A.U.S.
Elson, V. J., Danbury (Camp Walters, Tex.).....Capt., A.U.S.
Frank, L. J., Sioux City (Mare Island, Cal.).Lt. Comdr., U.S.N.R.
Graham, J. W., Sioux City (San Diego, Cal.).Lt. Comdr., U.S.N.R.
Grossman, M.D., Sioux City (APO 33, San Francisco, Cal.) .....Capt., A.U.S.
Heffernan, C. E., Sioux City (Salt Lake City, Utah) .....1st Lt., A.U.S.
Hicks, W. K., Sioux City (Spokane, Wash.).....Major, A.U.S.
Honke, E. M., Sioux City (Palm Springs, Cal.)..Capt., A.U.S.
Kaplan, David, Sioux City (Fort Bragg, N. C.)..1st Lt., A.U.S.
Knott, R. C., Sioux City (Atlanta, Ga.).....Capt., A.U.S.
Krigsten, W. M., Sioux City (Springfield, Mo.)..Lt. Col., A.U.S.
Lande, J. N., Sioux City (El Paso, Texas).....Major, A.U.S.
Martin, R. F., Sioux City (Gallatin, Tenn.).....1st Lt., A.U.S.
Mattice, L. H., Danbury (APO 4580, San Francisco, Cal.) .....1st Lt., A.U.S.
McCuistion, H. M., Sioux City (APO New York, N. Y.) .....Capt., A.U.S.
Mugan, R. C., Sioux City (Gowen Field, Idaho)..1st Lt., A.U.S.
Osincup, P. W., Sioux City (Edgewood Arsenal, Md.) .....1st Lt., A.U.S.
Rarick, I. H., Sioux City (APO 980, Seattle, Wash.)..Capt., A.U.S.
Reeder, J. E., Jr., Sioux City (Modesto, Cal.)....Capt., A.U.S.
Ryan, M. J., Sioux City (Topeka, Kan.).....Capt., A.U.S.
Schwartz, J. W., Sioux City (Ft. Leavenworth, Kan.) .....Lt. Col., A.U.S.
Tracy, J. S., Sioux City (Ephrata, Wash.).....Capt., A.U.S.
Wilson, L. L., Sioux City (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.

Worth County

Westly, G. S., Manly (APO 4580, San Francisco, Cal.) .....Major, A.U.S.

Wright County

Aagesen, C. A., Dows (Kansas City, Mo.).....Capt., A.U.S.
Bird, R. G., Clarion (Sacramento, Cal.).....Lt. Comdr., U.S.N.R.
Doles, E. A., Clarion (Phoenix, Ariz.)
Leinbach, S. P., Belmond (Farragut Air Base, Idaho)
Missildine, W. H., Eagle Grove (APO 25, San Francisco, Cal.) ..... Capt., A.U.S.

(*) Reported missing in action
(†) Reported killed in action.
(‡) Reported prisoner of war.

EXAMINATIONS FOR THE AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next written examination and review of case histories (Part I) for all candidates will be held in various cities of the United States and Canada and by special arrangements at Army and Navy Stations on Saturday, February 12, 1944, at 2:00 p. m. All applications must be in the office of the Secretary by November 15, 1943.

All candidates are now required to have been out of medical school not less than eight years, and in that time to have completed an approved one year internship and at least three years of approved special formal training, or its equivalent, in the seven years following the intern year. This Board's requirements for internships and special training are similar to those of the American Medical Association, since the Board and the American Medical Association are at present cooperating in a survey of acceptable institutions. At the last Board meeting held May, 1943, it was decided to give special credit for certain types of military service. All candidates must be full citizens of the United States or Canada before being eligible for admission to examinations. All candidates will be required to take the Part I examination which consists of a written examination and the submission of twenty-five case history abstracts, and the Part II examination (oral-clinical and pathology examination).

The Office of the Surgeon General (U. S. Army) has issued instructions that men in service, eligible for Board examinations, be encouraged to apply and that they may be ordered to detached duty for the purpose of taking these examinations whenever possible. If a candidate in service finds it impossible to proceed with the examinations of the Board, so that his plans are thus interrupted, deferment of parts of these without time penalty will be granted under a waiver of our published regulations covering civilian candidates.

For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

SPEAKERS BUREAU ACTIVITIES

PRESIDENT'S MEETINGS

Plans have now been completed and arrangements made for a series of ten President's Meetings to be held in various sections of the state. We sincerely hope that every member of the State Society will be able to attend at least one of the sessions which are scheduled below. The general speakers will discuss vital legislative and economic matters such as the Wagner-Murray-Dingell Bill, the American Medical Association's Council on Medical Service and Public Relations, the National Physician's Committee, the Federal Program for Emergency Maternal and Infant Care, and the Old Age Assistance Program. At each meeting two concise, scientific talks will be given, and with but two exceptions the material presented will deal with vitamin therapy and recent developments in the use of sulfonamides. Following the program there will be ample time for visiting fellow physicians and enjoying an evening of relaxation with friends.

RADIO SCHEDULE

Wednesdays—WOI at 2:05 p. m.
Thursdays—WSUI at 9:00 a. m.

November 3- 4 The Prevention of Smallpox and Diphtheria
Ruth E. Church, M.D.

November 10-11 Wagner-Murray-Dingell Bill
John W. Billingsley, M.D.

November 17-18 Care of the Eyes
Harold O. Gardner, M.D.

November 24-25 The Laboratory in Modern Medical Practice
Emory D. Warner, M.D.

Place	Date	Local Chairman	Presiding Chairman	General Speakers	Scientific Speakers
Red Oak Murphy Memorial Hospital 6:00 p. m.	November 2	W. S. Reiley	M. C. Hennessy	M. C. Hennessy R. L. Barnett J. B. Thornell	G. N. Best E. B. Floersch
Fairfield Liggett Hotel 5:00 p. m.	November 4	I. N. Crow	W. A. Sternberg	C. A. Boice C. P. Phillips	L. F. Catterson K. L. Johnston
Boone Hotel Holst 5:00 p. m.	November 4	B. T. Whitaker	E. M. Myers	A. L. Jenks M. I. Olsen	Harold Margulies J. C. Parsons
Sheldon Arlington Hotel 6:30 p. m.	November 4	W. R. Brock	F. P. Winkler	C. T. Maxwell H. E. Farnsworth	R. N. Larimer R. J. Harrington
West Union Country Club 5:00 p. m.	November 4	L. L. Carr	F. A. Hennessy	T. F. Thornton C. W. Ellyson J. F. Gerken	B. C. Boston S. A. Barrett
Algona Algona Hotel 5:00 p. m.	November 9	C. H. Cretzmeyer	L. R. Woodward	R. D. Bernard H. D. Fallows	R. E. Smiley L. W. Swanson
Denison Nielson Hotel 5:00 p. m.	November 9	C. L. Sievers	P. E. Sawyer	C. T. Maxwell R. H. McBride	R. N. Larimer R. J. Harrington
Toledo Legion Hall 5:00 p. m.	November 9	C. W. Maplethorpe	A. W. Erskine	J. L. Billingsley J. F. Gerken	A. F. Harrington B. J. Moon
Osceola Country Club 5:00 p. m.	November 9	H. E. Stroy	T. A. Burcham	A. L. Jenks M. I. Olsen	Harold Margulies J. C. Parsons
Monticello Community Building 5:00 p. m.	November 10	J. H. Fraser	F. P. McNamara	T. F. Thornton A. D. Woods J. A. Thorson	B. C. Boston K. K. Hazlet

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. W. S. REILEY, Red Oak
President-Elect—MRS. J. C. DECKER, Sioux City
Secretary—MRS. A. G. FELTER, Van Meter
Treasurer—MRS. A. E. MERKEL, Des Moines

REPORT OF NATIONAL CONVENTION

The trip to Chicago for the Annual Meeting of the Woman's Auxiliary to the American Medical Association June 7 to 9, 1943, was uneventful except for the crowded condition of the trains.

The meeting of the Board of Directors was called to order by Mrs. Frank N. Haggard, president of the Auxiliary. Routine preconvention business was transacted immediately after.

The Twenty-first Annual Meeting of the Auxiliary was opened in the Grand Ball Room of the Drake Hotel at 2:00 p. m. June 7, 1943, with Mrs. Frank N. Haggard presiding.

After the Invocation by Reverend Harrison Ray Anderson of the Fourth Presbyterian Church of Chicago, one could see many a tear-filled eye. Never before have I heard such a soul-reaching and sincere prayer. This was followed by the Address of Welcome by the Honorable Edward J. Kelly, Mayor of Chicago. It was a very hearty and inspiring talk and one could almost forget the regret of not being able to go to San Francisco, where the convention was originally scheduled. The change in meeting place was caused by war-imposed conditions on the time of American physicians, as well as lack of transportation and hotel facilities. Next came a very impressive moment of silent tribute to the deceased members; among the names read were those of Mrs. Walter L. Bierring and Mrs. Edward L. Bower.

After this came the introductions of Mrs. Rollo K. Packard, chairman of the Chicago Committee, and Mrs. Eben J. Carey, president-elect. The minutes of the Twentieth Annual Meeting were read by Mrs. Carleton F. Potter, secretary, and were followed by the roll call. Then came the reports of the various committees and the general business. The meeting adjourned at five o'clock. Immediately following adjournment a tea was held in the Gold Coast Room for members of the National Board of Directors and state delegates, honoring Mrs. Frank N. Haggard, president, and Mrs. Eben J. Carey, president-elect. Hostesses were the Woman's Auxiliary to the Chicago Medical Society and the Woman's Auxiliary to the Illinois State Medical Society.

On Tuesday, June 9, the general session was opened at 9:00 a. m., with Mrs. Haggard presiding. The ususal program of minutes and reports of various committees followed. At noon there was a luncheon in honor of Mrs. Haggard with the following guest speakers sharing honors: Dr. Frank P. Hammond; Brigadier General Fred Rankin, president of the American Medical Association; Dr. James E. Paullin, president-elect of the Association; and Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*. All talks were extremely interesting and inspiring.

At 2:00 p. m. the business session was reopened and the report of the Nominating Committee was received and adopted; officers were elected for the coming year and were installed. Mrs. Eben J. Carey gave the inaugural address and one gained the impression that she is sincerely interested in her work and is doing her utmost to fulfill her duties. Following this the minutes were read and the meeting was adjourned to be reopened at 8:00 p. m. for the House of Delegates, which was to be held at the Palmer House.

On Wednesday, June 9, there was a meeting of the Executive Committee, followed by a meeting of the Board of Directors. It was at this meeting that Dr. James P. Simonds, Professor of Pathology at Northwestern University Medical School, spoke on "The Effect of War on Medicine." It was a timely subject and he covered the field thoroughly. I regret that space will not permit me to quote the highlights of his talk. Another interesting speaker at this time was Mrs. Edgar H. Greene of Atlanta, Georgia, who spoke on "The Doctor's Aide Corps." In my opinion the outstanding feature of the convention was the formation of the committee for "War Service."

The final luncheon was held in the Gold Coast Room of the Drake Hotel, which overlooks the lake. This was a perfect setting since the room was decorated in palms, ferns, and flowers of all descriptions. The colorful hats and dresses of the ladies made a scene which will not soon be forgotten. Miss Margaret Wolf was very efficient in her rôle as chairman of the convention arrangements, and I am sure that she will have a home with the Auxiliary family as long as she desires.

Chicago has long been a city of conventions and the people are well versed in the art of making their guests enjoy themselves and feel at home. The city has many beautiful buildings and homes and wonderful places of interest, and I was glad to have had the privilege of visiting there again to attend the convention and to meet the charming members of the Auxiliary.

Mrs. W. S. Reiley, President

FALL BOARD MEETING

The fall Board Meeting of the Woman's Auxiliary to the Iowa State Medical Society was held in the Maple Room of the Grace Ransom Tea Room on October 12, 1943. Following luncheon, Mrs. W. S. Reiley, president, called the meeting to order and presented Dr. Lee R. Woodward of Mason City, president of the Iowa State Medical Society, who made an address on the Wagner-Murray-Dingell Bill for Social Security.

Dr. Woodward urged that doctors' wives become informed concerning this bill, which has been under discussion for about six years and which, in all probability, may be introduced to Congress not later than January, 1944. Medical social security has been with us in the form of Old Age Pensions and more recently in the obstetric and pediatric care for servicemen's dependents. It has been the personal experience of many doctors that there "is no cure for the disease of federal relief."

At the present time approximately 40 per cent of the vote is controlled by farmers and 40 per cent by labor, and it behooves the medical profession to make the public aware that socialized medicine is only another step toward socialized government. It is not the doctor alone who will be affected by bureaucratic control, but the public will feel the sting of administrative costs. These costs will be more than those of ministration have ever been, and they will not cure a single sick person.

The general public is in ignorance of the implications of the Wagner-Murray-Dingell Bill and indifferent to the fact that politics has the advantage of organization, program, and finance. If medicine is steered into bureaucratic control, it is bound to be only a matter of time until other business interests are harnessed by the government also.

Miss Mary McCord of the State Office of the Iowa State Medical Society supplemented Dr. Woodward's talk with a brief explanation of the platform agreed upon by the Iowa Interprofessional Association in its recent convention in Des Moines. This group is composed of doctors of medicine, nurses, dentists, pharmacists, and veterinarians. The Hospital Association and certain insurance groups have an allied interest in this organization which proposes to fight bureaucratic socialism by educating the public concerning the Wagner-Murray-Dingell Bill.

The Woman's Auxiliary to the Iowa State Medical Society agreed to await orders from the doctors in regard to public education. Printed material about the Wagner-Murray Bill will be forthcoming soon. Methods of procedure will be determined by the Legislative and Public Relations Committees of the Woman's Auxiliary.

The minutes of the spring Board Meeting were read and approved. Chairmen of the standing committees made their reports. Mrs. W. R. Hornaday reported $324.24 on hand for the Nurses Loan Fund. Blanks will be distributed to hospitals soon so that nurses may obtain small loans from this fund. Mrs. S. D. Maiden of Council Bluffs was appointed in the place of Mrs. C. J. Kurth on the Public Relations Committee. Mrs. M. C. Hennessy of Council Bluffs was officially named chairman of the new War Service Committee. Mrs. Reiley appointed Mrs. F. W. Mulsow of Cedar Rapids, Mrs. E. T. Warren of Stuart, and Mrs. S. S. Westly of Manly to the Nominating Committee. Mrs. G. W. Egermayer of Elliott and Mrs. B. C. Hamilton of Jefferson were elected to serve on the same committee.

Mrs. K. M. Chapler, Chairman,
Press and Publicity Committee

MRS. MULSOW ELECTED TO NATIONAL OFFICE

The Woman's Auxiliary to the Iowa State Medical Society is honored in the knowledge that its former president, Mrs. Frederick W. Mulsow of Cedar Rapids, was elected Fourth Vice President of the Woman's Auxiliary to the American Medical Association. This position automatically makes Mrs. Mulsow Organization Chairman of the North Central District, which comprises twelve states.

RED CROSS VOLUNTEER DIETITIAN'S AIDES*

The Volunteer Dietitian's Aide Corps is a war-born newcomer among the American Red Cross Volunteer Special Services.

A shortage of professional dietitians and of trained lay assistants in hospitals of the nation accounts for the innovation. Successful completion of the prescribed training course for corps membership qualifies women volunteers to assist in hospital diet kitchens. They measure and weigh portions of food in special diets, prepare trays, assist in serving and attend to lighter after-meal duties.

The prerequisite for training as a Dietitian's Aide is the twenty-hour Red Cross Standard Nutrition Course, or its equivalent. Candidates for the service must, after taking the forty-hour Dietitian's Aide Course, agree to give at least one hundred fifty hours of service each year in the local institutions where the service is in operation. The forty-hour course includes twenty-five hours of lecture and fifteen hours of practice in the hospital under a hospital-approved instructor.

The woman who has earned her certificate as a Volunteer Dietitian's Aide may wear a uniform of commando blue distinguished by blue epaulets with a white stripe, and a Volunteer Special Service pin.

In Iowa plans are being made to introduce the service in hospitals in Des Moines. The Polk County Chapter of the American Red Cross is establishing the training course after hospital administrations found themselves no longer able, with depleted staffs, to meet the demands of their capacity patient loads. Mrs. Harold B. West, with a background of Home Economics and active in Red Cross Canteen Service, is chairman of the Dietitian's Aide Corps.

Plans for the service of Dietitian's Aides are also

(Continued on page 542)

*Prepared by the Public Information Service of the American Red Cross, Midwestern Area, for the Public Relations Committee of the Woman's Auxiliary to the Iowa State Medical Society.

SOCIETY PROCEEDINGS

Appanoose County

Members of the Appanoose County Medical Society met in Centerville at St. Joseph's Mercy Hospital Tuesday evening, October 12. The scientific program for the evening consisted of an illustrated scientific recording on Diseases of the Gallbladder by R. Russell Best, M.D., Omaha.

R. L. Fenton, M.D., Secretary

Black Hawk County

The regular meeting of the Black Hawk County Medical Society was held in Waterloo Tuesday evening, October 19, at Black's Tea Room, with dinner at 6:30 p. m. Charles W. Ellyson, M.D., and Thomas F. Thornton, M.D., reviewed the Wagner-Murray-Dingell Bill, following which there was a general discussion of the Bill by all members present.

S. A. Barrett, M.D., Secretary

Butler County

The Butler County Medical Society met in Allison Tuesday evening, October 19. The scientific program consisted of a motion picture, entitled Varicose Veins: Their Treatment by the Modern Combined Ligation and Injection Treatment, by H. O. McPheeters, M.D., of Minneapolis, and an address on Carcinoma of the Esophagus by Fred A. Rolfs, M.D., of Aplington.

F. F. McKean, M.D., Secretary

Dallas-Guthrie Society

Members of the Dallas-Guthrie Medical Society met Thursday noon, October 21, in Panora at the Presbyterian Church Hall. Frank W. Fordyce, M.D., of Des Moines spoke before the group on Chest Surgery, and Grace M. Sawyer, M.D., of Woodward discussed Two Types of Feebleminded Patients.

S. J. Brown, M.D., Secretary

Dubuque County

The Dubuque County Medical Society met in Dubuque at Finley Hospital Tuesday evening, October 12. The guest speaker of the evening was Ransom D. Bernard, M.D., Clarion, who discussed the Wagner-Murray-Dingell Bill and its effect on the present system of medical treatment. Finley Hospital nurses were also present for the address.

Johnson County

The regular monthly meeting of the Johnson County Medical Society was held in Iowa City at Hotel Jefferson Wednesday, October 6, at 6:00 p. m. The scientific program was under the direction of Pauline V. Moore, M.D., who presented an interesting case report of cretinism which was diagnosed at the age of six weeks. Mark L. Floyd, M.D., discussed the case. The Wagner-Murray Bill was also brought before the Society for consideration.

A. L. Sahs, M.D., Secretary

Linn County

The Linn County Medical Society met Thursday evening, October 14, at 6:30 p. m. in Cedar Rapids at the Montrose Hotel. The guest speaker of the evening was Adolph L. Sahs, M.D., Assistant Professor of Neurology at the University of Iowa College of Medicine, who spoke on Meningitis. The paper was discussed by Morgan J. Foster, M.D., and Benjamin F. Wolverton, M.D., both of Cedar Rapids.

Louisa County

The Louisa County Medical Society held its regular monthly meeting in Grandview Thursday evening, October 14. Officers elected to serve the Society during the coming year are Dr. Ola A. Kabrick of Grandview, president, and Dr. Leslie E. Weber of Wapello, secretary and treasurer.

Palo Alto County

The Palo Alto County Medical Society met in Emmetsburg Thursday evening, September 30, for dinner and a social evening in honor of Dr. James W. Woodbridge of that city who has been engaged in the practice of medicine fifty years, forty-eight of which have been spent in Palo Alto County. Dr. James B. Knipe of Armstrong, Councilor in the Third District, presented Dr. Woodbridge with the Fifty-Year Club pin and plaque. The nurses and hospital board sent him a beautiful bouquet. Doctors who were present from out of the county included Drs. W. W. Bowen of Fort Dodge, C. E. Birney and M. T. Morton of Estherville, C. H. Cretzmeyer of Algona, J. W. McCreery of Whittemore, and J. B. Knipe of Armstrong.

P. O. Nelson, M.D., Secretary

Scott County

The November meeting of the Scott County Medical Society will be held in Davenport at the Lend-A-Hand Club Tuesday evening, November 2. The guest speaker of the evening will be Frank R. Peterson, M.D., Professor of Surgery at the University of Iowa College of Medicine, who will speak on The Treatment of Gallbladder Disease. Election of officers for the coming year will also be held at this meeting.

L. J. Miltner, M.D., Secretary

Tama County

Members of the Tama County Medical Society met in Gladbrook in the English Methodist Church Tuesday evening, October 12. Dinner was served at 6:30 p. m. The program for the evening was a roundtable discussion of legislation, pending and enacted. During the business meeting arrangements were made for the President's Meeting which is to be held in Toledo Tuesday evening, November 9.

C. W. Maplethorpe, M.D., Secretary

Taylor County

The Taylor County Medical Society held a meeting in Lenox at Hotel Lenox Monday evening, September 27. The discussion period consisted of the following papers: Anatomy of the Thyroid Gland by George W. Rimel, M.D., of Bedford; Function of the Thyroid Gland by Charles E. Buckley, M.D., of Blockton; Hyperthyroidism by Roe B. Reed, M.D., of Clearfield; and Hypothyroidism by James H. Gasson, M.D., of Bedford. A motion picture on Purposeful Splinting Following Injuries of the Hand, by Drs. Sumner L. Koch, Michael L. Mason, and Harvey S. Allen of Chicago, was presented to the Society, and also a film on Hemorrhoids and a Method of Hemorrhoidectomy by Dr. Frederick B. Campbell of Kansas City.

W. H. Cash, M.D., President

Wapello County

Members of the Wapello County Medical Society met in Ottumwa at St. Joseph's Hospital Friday evening, October 8. The program featured a review of the medical men and their methods as practiced in Wapello County from pioneer days to the present era, which was presented by Clyde A. Henry, M.D., of Farson, who has made a hobby of collecting medical data concerning that section of Iowa.

PERSONAL MENTION

William F. Mengert, M.D., Associate Professor of Obstetrics and Gynecology at the University of Iowa College of Medicine, has announced his acceptance of a position on the staff of Southwestern Medical Foundation in Dallas, Texas. Dr. Mengert will be Professor and Head of the Department of Obstetrics and Gynecology and will begin his new duties November 1.

Dr. R. D. Bernard of Clarion spoke before the Rotary Club of Dubuque at its meeting Tuesday noon, October 12. The subject of Dr. Bernard's discussion was the Wagner-Murray Bill.

Dr. John O. Cook has been appointed to the staff of the State Hospital at Woodward. Dr. Cook, who has practiced in Madrid for many years, took over his new duties on October 1.

Dr. William Van Zanten, who has been located in Boyden for the past several years, has moved to Brighton where he succeeds Dr. Murry L. McCreedy.

Dr. Albert A. Schultz of Fort Dodge addressed the Rockwell City Lions Club at its regular bi-monthly meeting Monday evening, October 11. Dr. Schultz spoke on the Wagner-Murray Bill.

MARRIAGE

Miss Margaret McGivern and Dr. Anthony P. Donohoe of Davenport were united in marriage Saturday morning, October 2, in St. Henry's Catholic Church in LeClaire, Iowa. Following a short wedding trip, the couple will reside in Davenport where Dr. Donohoe has been engaged in the practice of medicine for the past several years.

DEATH NOTICES

Amos, Andrew Raymond, of Beverly Hills, California, aged eighty-five, died September 17 following an illness of several months. He was graduated in 1882 from Rush Medical College, and at the time of his death was a life member of the Polk County and Iowa State Medical Societies.

Haisch, Otto Edward, of Dubuque, aged sixty-nine, died September 23 following an illness of several weeks. He was graduated in 1905 from Keokuk Medical College, College of Physicians and Surgeons, and at the time of his death was a member of the Dubuque County Medical Society.

Harriman, Walter Franklin, of Sioux City, aged forty-five, died October 11 of a heart attack. He was graduated in 1924 from the University of Pennsylvania School of Medicine, and at the time of his death was a member of the Woodbury County Medical Society.

Seabloom, John L., of Red Oak, aged seventy, died suddenly October 9. He was graduated in 1904 from the St. Louis College of Physicians and Surgeons, and at the time of his death was a member of the Montgomery County Medical Society.

Tidball, Charles Willis, of Independence, aged fifty-five, died September 24 of a heart attack following an illness of more than a year. He was graduated in 1913 from the Jefferson Medical College of Philadelphia, and at the time of his death was a member of the Buchanan County Medical Society.

Wallace, Charles E., of New Sharon, aged eighty-five, died September 24 after an illness of two years. He was graduated in 1884 from the Miami Medical College in Cincinnati, Ohio, and at the time of his death had long been a member of the Mahaska County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WALTER L. BIERRING, Des Moines, Chairman
DR. HENRY G. LANGWORTHY, Dubuque, *Secretary*
DR. JOHN T. MCCLINTOCK, Iowa City
DR. MURDOCH BANNISTER, Ottumwa
DR. FRANK E. SAMPSON, Creston

Medical History of Woodbury County

WILLIAM JEPSON, M.D., Sioux City

PART III

(Continued from last month)

The histories of the Sioux City College of Medicine and the Sioux City Hospitals which follow have been reproduced from Dr. J. N. Warren's Medical History of Sioux City and the Northwest as it appears in "The History of the Northwest" by Arthur F. Allen.

Since Dr. Warren was not a resident of the city at the time of the organization of the college and the first two hospitals, he, as a consequence, would not be as familiar with the inception of these institutions as would have been the case had he resided here. In order that these histories may be more complete an addendum will follow each of those histories portraying more clearly the factors which led to the development of these institutions. *(Taken from J. N. Warren's Medical History of the Northwest in History of the Northwest by Arthur F. Allen.)*

"Dr. J. N. Warren was Dean of the Faculty and Dr. E. D. Frear was Secretary of the Sioux City College of Medicine. The incorporation of this college was largely owing to Dr. William Jepson. He started with nine instructors. Each year, after 1890, a class was graduated. It was a member of the American Medical College Association. The College was closed in 1909, and its activities transferred to the University of South Dakota where it has continued since carrying on the Freshman and Sophomore years. At the time of closing there were twenty-seven instructors and eleven assistants. Dr. Jepson occupied the Chair of Surgery and Clinical Surgery from its inception until 1902 when he was appointed Professor of Surgery and Clinical Surgery of the Medical Department of the State University of Iowa, which position he occupied until he resigned in 1913."

ADDENDUM

The Sioux City College of Medicine did not have its origin in an attempt by any one of the medical profession of the city to promote his individual interest. Those who served the college in the capacity of teachers or the performance of other activities did so under the assumption that they were performing a needed civic duty.

In 1889 there was organized by the Methodist Conference of the Northwest, the University of the Northwest. This University had a Department of Law leading to the Degree of LL.B. and a Department of Medicine leading to the Degree of M.D. Wilmot Whitfield was its first Chancellor. The members of the various faculties were selected and received their appointment from the Board of Regents of the University. Dr. George W. Beggs was the first Dean and Dr. William Jepson, Secretary. The duty of managing the affairs of the college devolved largely upon the latter; and it is possible, from this observed fact, that Dr. Warren concluded he organized the college.

The founding of the University of the Northwest occurred at a time when Sioux City was experiencing a phenomenal growth or boom evidenced by elevated railways, cable cars, railway building, and so forth, and great things were predicted for the future of the city.

With the financial crash of 1892 the foundation of all enterprises here, as elsewhere, collapsed and with it the University; and out of the wreckage there emerged the Morningside College and the Sioux City College of Medicine, each being left to shift for itself. The Sioux City College of Medicine continued its activities for eighteen years. Then it saw the "handwriting on

the wall;" namely, that all schools not connected with a University amply endowed, with a few exceptions, must succumb as had or did happen to three hundred fifteen of the three hundred eighty-five schools of the country, and to eleven of the twelve schools of the state. In 1908 the activities of the College of Medicine were transferred to the University of South Dakota.

The faculty at the time of closing consisted of:

J. N. Warren, Dean, Professor of Surgery and Clinical Surgery.

E. D. Frear, Secretary, Professor of Dermatology and Hygiene.

A. J. Dales, Professor of Surgical Anatomy and Clinical Surgery.

H. A. Wheeler, Professor of Theory and Practice of Medicine.

F. J. Murphy, Professor of Therapeutics and Clinical Medicine.

C. M. Wade, Professor of Orthopedic Surgery.

H. N. Brothers, Professor of Materia Medica.

F. S. Johnson, Professor of Pathology and Bacteriology.

George Park, Professor of Ophthalmology and Otology.

I. E. Nervig, Professor of Anatomy.

J. G. Talbot, Professor of Obstetrics.

W. S. Tharp, Professor of Genito-Urinary Surgery.

M. D. Daily, Professor of Pathology.

A. McMahan, Professor of General Chemistry.

Arthur Wade, Professor of Medical Chemistry.

F. E. Franchere, Professor of Neurology.

A. M. Warren, Professor of Gynecology.

C. F. Thompson, Professor of Osteology and Syndesmology.

C. N. Jepson, Medical Jurisprudence.

HOSPITALS OF SIOUX CITY

SAMARITAN HOSPITAL

"The Samaritan Hospital was the first one to be founded in Sioux City.

"It commenced operation in a two-story frame building, formerly a residence on the corner of 17th and Pierce Streets in 1875. In 1878 a new three story brick building was finished and occupied. It continued in operation until 1924. It had a fully equipped laboratory and a training school for nurses.

"This hospital was under the supervision of the W.C.T.U. of the city. On account of lack of funds to keep it in proper operation it was closed. It was placed in Class A Hospitals by the American College of Surgeons.

"It was the pioneer and leading hospital for many years."

ADDENDUM

There exists an error in the date of founding the hospital. In the year 1887 the W.C.T.U. owned a frame building at Ninth and Wall Streets in Sioux City, which was used as a home for aged indigents. An appeal was made by Dr. Jepson to the organization, through its President, Mrs. I. A. Patterson and Mrs. Groninger, Vice President, to permit this building to be converted into a hospital for the care of patients, especially those suffering from typhoid fever which was extremely prevalent. Many of these persons were single working men living in boarding houses without anyone to care for them. While the W.C.T.U. did not assent to this request, it did what which was much better. It opened the Samaritan Hospital, as stated by Dr. Warren, the following summer; namely, in 1888 and not in 1875-8.

ST. JOSEPHS MERCY HOSPITAL

"The St. Josephs Mercy Hospital, one of the most complete of the kind in the northwest, was the first Catholic Hospital in the city.

"On September 7, 1890, the cornerstone of the original hospital was laid, a few months after the institution had been established by Sister Mary Seraphine, who had been appointed Superior of the little band of Sisters of Mercy.

"The new building, costing about $12,000.00, was completed and occupied that year.

"It had a capacity of 60 beds. In 1902 a material addition to the capacity of the hospital was made, and in 1911 another addition was erected. The great annex to the hospital was completed in 1926 at a cost of $350,000.00 and was the culmination of many years of ceaseless work and faithfulness.

"The Obstetrical Department was especially enlarged and improved. The addition lately opened was constructed under the supervision of Mother M. Ursula.

"The members of the first staff were Dr. William Jepson, Dr. Frank Murphy, Dr. J. P. Savage, Dr. Gay Reich, and Dr. J. N. Warren."

ADDENDUM

The facts surrounding the founding of the hospital were as follows:

In the summer of 1887 an appeal was made by Dr. Jepson to the Rt. Rev. Bishop Hennessy of Dubuque to countenance the effort and to have the Sisters of Mercy of Dubuque establish a hospital in this city. His reply was supportive of the project.

These efforts resulted in a visit to the city on October 25, 1889, by Mother Agatha, Superior of the Mercy Hospital of Dubuque, to look over the

ground with a view of opening a hospital here under the auspices of the Sisters of Mercy. Father Tracy, in reporting to the JOURNAL, stated:

"Mother Agatha was well pleased with the prospects offered of serving the City's hospital needs. My hands are so full of work that I cannot do much of the initiatory labor of the project. Dr. Jepson is much interested in it. It will, no doubt, be urged upon the notice of the citizens properly." The efforts which had been made during some three years by the one who had set for himself the task of promoting the city's needs of hospital facilities had resulted in the City Council and Board of Supervisors and many influential citizens supporting the project. The result was that on April 8, 1890, at a meeting of the Board of Supervisors, Walter Strange, its Chairman, offered a resolution in favor of establishing a new City Hospital to meet the needs of the increasing population. A second meeting followed on April 10, 1890, at which time the project was discussed by the Supervisors and representative citizens who favored a new hospital. No one spoke for the Sisters at either of these meetings; but it was suggested that a stock company, capitalized at $10,000.00, be formed to finance a new hospital for the city. No definite action was taken. On the evening of April 11, 1890, a joint meeting of the Board of Supervisors, City Council, and citizens was held at the Court House with Mayor Palmer presiding. Prominent citizens voiced their views; and after giving the others a hearing, a rising young surgeon (Dr. Jepson) boldly took the floor and proposed that the Sisters of Mercy be put in charge of the new hospital. He stated that the Sisters had been looking for an opening in the city for three years; that he had wired them asking if they would be willing (which he knew beforehand they would) to come to Sioux City and take charge of the new hospital; that they had replied in the affirmative; and that they would be here the following Monday, April 14, to undertake the duties.

Dr. Warren, in his history, happens to be in error relative to the first staff. For the first twelve years the hospital was operated by a closed staff consisting of the faculty of the Sioux City College of Medicine, who extended the privileges of the hospital to a few other medical men of known competency, one of whom was Dr. Warren.

A closed staff was a necessity at that time with medicine and surgery entering upon the new era based upon bacteriology and pathology. Neither the hospital nor the College had any reputation to rest upon, but had to build it up from the basement, so to say, and dared not permit the servicing of any patient except such as were surrounded by the best scientific care. The success of both depended upon this.

PART IV

In the preceding part it has been shown that within two years a city without a hospital was provided with two very good hospitals. Other hospitals which rather quickly came into being are as follows:

THE ST. VINCENT'S HOSPITAL

"The St. Vincent's Hospital is under the management of the Benedictine Sisters and was founded in 1907.

"It commenced operations in a building on the corner of Seventh and Pierce Streets with a capacity of fifty beds. In 1917 they erected a new fireproof modern building at Seventh and Jones Street, with a capacity of 130 beds.

"The Hospital is fully equipped with laboratories and four modern operating rooms. It conducts a Nurses Training School with competent instructors, which was organized in 1910. Mother Gertrude was the Superintendent."

THE LUTHERAN GENERAL HOSPITAL

"The Lutheran General Hospital was organized in 1901 by a number of individuals and congregations of the churches in Sioux City. They formed a Hospital Association which purchased a frame building on Twenty-Seventh, between Pierce and Nebraska Streets, which had been used for some time as a private hospital.

"The first President of the Association was Reverend H. Wehking of Alta, Iowa, who still (1926) holds that position. Rev. A. Armstein of Charter Oak has served as Vice-President for the same period. Dr. John Herman was Chief Surgeon of the Hospital until his death in 1916. He donated and sold a site adjoining the original building and the following year a two-story addition was completed.

"In 1920 a three-story addition was completed. In 1925 additions were erected, with a capacity of 100 beds, modern in every detail and it was accorded an A Hospital. It conducts a Training School for Nurses fully accredited."

(To be continued)

SAVE MEDICAL JOURNALS

Dr. Jeannette Dean-Throckmorton, Librarian of the Iowa State Medical Library, located in the Historical Building in Des Moines, is most anxious to receive old copies of medical journals. They should be sent direct to her.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ESSENTIALS OF SYPHILOLOGY—By Rudolph H. Kampmeier M.D., associate professor of medicine, Vanderbilt University School of Medicine; in charge of the Syphilis Clinic and visiting physician to Vanderbilt University Hospital; with chapters by Alvin E. Keller, M.D., and J. Cyril Peterson, M.D. The J. B. Lippincott Company, Philadelphia, 1943. Price, $5.00.

MEDICAL PARASITOLOGY—By James T. Culbertson, assistant professor of bacteriology, College of Physicians and Surgeons, Columbia University. Columbia University Press, New York, 1942. Price, $4.25.

THE 1942 YEAR BOOK OF GENERAL THERAPEUTICS—Edited by Oscar W. Bethea, M.D., professor of clinical medicine, Tulane University School of Medicine. The Year Book Publishers, Chicago, 1942. Price, $3.00.

DISEASES OF THE SKIN—By Oliver S. Ormsby, M.D., Rush professor of dermatology, University of Illinois, and Hamilton Montgomery, M.D., associate professor of dermatology and syphilology, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, Rochester, Minnesota. Sixth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1943. Price, $14.00.

THE PRINCIPLES AND PRACTICE OF OBSTETRICS—By Joseph B. DeLee, M.D., formerly professor of obstetrics and gynecology, emeritus, University of Chicago, consultant in obstetrics, Chicago Lying-in Hospital and Dispensary, consultant in obstetrics, Chicago Maternity Center; and J. P. Greenhill, M.D., attending obstetrician and gynecologist, Michael Reese Hospital, obstetrician and gynecologist, associate staff, Chicago Lying-in Hospital, attending gynecologist, Cook County Hospital, professor of gynecology, Cook County Graduate School of Medicine. Eighth edition, entirely reset. W. B. Saunders Company, Philadelphia, 1943. Price, $10.00.

THE ANATOMY OF THE NERVOUS SYSTEM—By Stephen Walter Ranson, M.D., Ph.D., formerly professor of neurology and director of Neurological Institute, Northwestern University Medical School, Chicago. Seventh edition, revised. W. B. Saunders Company, Philadelphia, 1943. Price, $6.50.

NEUROSURGERY AND THORACIC SURGERY, Military Surgical Manuals Volume VI—Prepared and edited by the Subcommitttee on Neurosurgery and Thoracic Surgery of the Committee on Surgery of the Division of Medical Sciences of the National Research Council. W. B. Saunders Company, Philadelphia, 1943. Price, $2.50.

SYNOPSIS OF PATHOLOGY—By W. A. D. Anderson, M.D., assistant professor of pathology, St. Louis University School of Medicine; pathologist, St. Mary's Group of Hospitals. The C. V. Mosby Company, St. Louis, 1942. Price, $6.00.

BLOOD GROUPING TECHNIC—By Fritz Schiff, M.D., late chief of the department of bacteriology, Beth Israel Hospital, New York; and William C. Boyd, Ph.D., associate professor of biochemistry, Boston University School of Medicine. Interscience Publishers, Inc., New York, 1942. Price, $5.00.

MANUAL OF FRACTURES, Treatment by External Skeletal Fixation—By C. M. Shaar, M.D., Captain, Medical Corps, United States Navy, and Frank P. Kreuz, Jr., M.D., Lieutenant Commander, Medical Corps, United States Navy. W. B. Saunders Company, Philadelphia, 1943. Price, $3.00.

METHODS OF TREATMENT—By Logan Clendening, M.D., clinical professor of medicine, Medical Department of the University of Kansas, attending physician, University of Kansas Hospitals; and Edward H. Hashinger, M.D., clinical professor of medicine, Medical Department of the University of Kansas, attending physician, University of Kansas Hospitals, attending physician, St. Luke's Hospital, Kansas City, Missouri. Eighth Edition. C. V. Mosby Company, St. Louis, 1943. Price, $10.00.

FUNDAMENTALS OF IMMUNOLOGY—By William C. Boyd, Ph.D., associate professor of biochemistry, Boston University School of Medicine. Interscience Publishers, Inc., New York, 1943. Price, $5.50.

NASAL MEDICATION, A Practical Guide—By Noah D. Fabricant, M.D., associate in laryngology, rhinology, and otology, University of Illinois College of Medicine. The Williams & Wilkins Company, Baltimore, 1942. Price, $2.50.

BOOK REVIEWS

PSYCHOSOMATIC MEDICINE

By Edward Weiss, M.D., professor of clinical medicine, Temple University Medical School, Philadelphia; and O. Spurgeon English, M.D., professor of psychiatry, Temple University Medical School, Philadelphia. W. B. Saunders Company, Philadelphia, 1943. Price, $8.00.

Psychosomatic medicine is a new term, but its subject matter is as old as the art of medicine itself. The successful family physician and student of internal medicine has always known the emotional life of his patient is intimately related to the course and outcome of his illnesses, and that the laboratory alone does not explain the whole man. "Horse sense" and intimate acquaintance with the family background have enabled him to meet these problems, and he has perhaps never found it necessary to make a study of formal psychiatry. Selective Service now challenges him with the finding that one-third of all rejections of young men for military service are due to mental and nervous disorders, often unsuspected before the examination for induction. War neuroses are re-awakening interests of the general practitioner and specialist alike in the problems of personality reactions to life situations, originating or modifying the symptoms with which patients present themselves.

In this book one finds able teachers offering in clear nontechnical language expositions of how to recognize and to treat emotional factors complicating bodily illnesses. Dr. Weiss is a counsellor for the newly formed American Society for Research in Psychosomatic Problems; Dr. English is a Diplomate of the American Board in Psychiatry. They divide their book of 651 pages into twenty-three chapters covering personality development, the problem of underlying mental disturbances as they affect the various organ systems, military medicine, and special topics. General principles of psychotherapy and special treatment procedures are given in three chapters, and a chapter on training in psychosomatic medicine concludes the book. Case reports from wide

experience document every point, not forgetting direct, practical advice on questions the family doctor is asked about normal children and grown-ups, sexual conduct, marriage, and divorce. A topical index and complete subject index makes the material available for instant reference; there are thirty-five illustrative diagrams and eight pages of bibliography arranged by chapters and selected topics.

The authors state "the busy practitioner can read the first two chapters and the last four to get a general idea of the subject," but it is your reviewer's opinion no one so introduced to the book is going to lay it down without completing it, remembering Osler's quotation from Plato, "and I said of medicine that this is an art which considers the constitution of the patient, and has principles of action and reasons in each case."

One might quarrel with an occasional over-simplification in psychiatry and condensations used by the authors for emphasis; for example, the statement on Page 4 of the Preface that without Freud no work on psychosomatic medicine could have been attempted, and on Page 629 "psychoanalysis is related to psychiatry as microscopic anatomy is related to gross anatomy." Although the authors stress depth psychology, they recite only superficial analyses of their patients. The otherwise excellent readable style of the book is marred by somewhat careless writing toward the end.

N. D. R.

ORAL DIAGNOSIS

By Kurt H. Thoma, D.M.D., professor of oral surgery and Brackett Professor of oral pathology, Harvard University; oral surgeon and chief of dental service, Massachusetts General Hospital; oral surgeon, Brooks Hospital; dental surgeon, dental department, consultant in oral surgery, tumor department, Boston Dispensary and Joseph H. Pratt Diagnostic Hospital. Second edition, revised. W. B. Saunders Company, Philadelphia, 1943. Price, $6.75.

The arrangement of the material in this volume is excellent, and with the suggestions given by the author one can turn without delay to a discussion of any subject or condition relating to diseases or abnormalities of the oral cavity. It is profusely illustrated, and this adds materially to the value of the book in conveying the author's ideas to the reader.

Correct oral diagnosis and treatment planning are the foundation for all dental operations, and this volume is the greatest aid to this important subject that it has been my privilege to read. It is most valuable for either the student or the busy dentist, and I cannot recommend it too highly to anyone who wishes to improve his ability in oral diagnosis.

L. C. H.

GYNECOLOGY

By Lawrence R. Wharton, M.D., associate in gynecology, The Johns Hopkins Medical School. W. B. Saunders Company, Philadelphia, 1943. Price, $10.00.

This textbook on gynecology and urology is one which will be appreciated by both the practitioner and the student. The anatomic discussion is adequate, and the section on physiology is complete. The therapeutic approach to the various types of idiopathic bleeding is rational, conservative and physiologic. The section on childbirth injuries and misplacement of the uterus is adequate, and nonoperative treatment is stressed. The review on pelvic infection, particularly treatment, is very modern and well presented. There are no startling, new, therapeutic approaches found in the sections dealing with cervical and uterine malignancies. The chapter on sterility is exceptionally well presented. The author wisely includes a section on diseases of the umbilicus and appendix. He also presents the normal hygiene of the healthy woman.

In the urologic portion of the text, the more common conditions are well discussed. The inclusion of female urology in this volume on gynecology is an excellent idea and one which will be well received by the practitioner. There is an excellent chapter on the chemotherapy of gynecologic and urinary conditions.

As a whole, this is a well organized and well presented textbook. The illustrations are fair, but colored plates would improve the book greatly.

M. J. R.

A MANUAL OF CLINICAL THERAPEUTICS

By Windsor C. Cutting, M.D., associate professor of therapeutics, Stanford University School of Medicine, San Francisco, California. W. B. Saunders Company, Philadelphia, 1943. Price, $4.00.

In the field of therapeutics, as in no other field of medicine, a compact manual such as this is of the most practical value. Heretofore the choice has been between voluminous and exhaustive works on therapy and the smaller manuals which devote most of their space to numerous and sundry prescriptions. The author, in this volume, has struck a happy medium between these two extremes. The book is small enough to be carried in a physician's bag; however, it is sufficiently complete to be used as a handy, quick reference in the office.

In a general way, as mentioned in the Preface, the book reflects the author's experiences in treatment for the most part at the Stanford Hospitals, and to a more limited extent at Middlesex Hospital in London and the Johns Hopkins Hospital in Baltimore.

At the outset there are two brief chapters on general problems in therapy which include general

measures of value in the treatment of symptoms and a brief statement of dietary management. The treatment of infectious diseases is considered under the following headings: general measures, specific measures, and prevention. Following the discussion of treatment of each disease there is given a list of references which are the most recent and informative articles on the subject. These references are limited to the more readily available journals; the author states, "Preference is given to articles appearing in the *Journal of the American Medical Association* as this journal is readily accessible to most students and physicians." In the following chapters, treatment is given according to the system involved.

In the Appendix there is a brief but rather complete discussion of special procedures used in medicine which require some technical skill. The symptoms and treatment of poisoning are listed in considerable detail. Quantitative methods for controlling the therapeutic use of various drugs are discussed in a separate chapter, and finally a list of drugs and their dosage with some comment on the individual use of the drug is given.

One cannot help but feel that this book will be a valuable addition to any library and of most practical use in general practice. It is hoped that it will be re-edited at intervals to keep abreast with any newer forms of treatment which are of value.

F. J. P.

WHEN DOCTORS ARE RATIONED

By Dwight Anderson, director of public relations, Medical Society of the State of New York; and Margaret Baylous, therapist, Charleston General Hospital, Charleston, West Virginia. Coward-McCann, Inc., New York, 1942. Price, $2.00.

With one-third of the medical personnel in the armed forces, doctors are being rationed. This means that, in order to supply the medical needs of civilians, doctors must be "subjected to the necessity of careful distribution," and a revaluation of available medical services and facilities must be worked out.

This book tells of the mobilization of doctors under the Preparedness Committee of the American Medical Association and how it was one of the few vital parts of the war mechanism to function when called. It also gives an analysis of the importance of war medicine in both active and civilian services.

Today our fighting forces are getting the best medical care in the world. This care is available to civilians also, but they must adapt themselves to the prevailing conditions of public health facilities and rationed medical services. To do this they must know how to choose a doctor intelligently; how to be a good patient; and how to keep physically fit and mentally healthy in times of stress and strife.

The book is an excellent study of wartime health problems and fears which harass civilians. Dr. Nathan B. Van Etten, in the introduction, calls it the first accurate interpretation of medical service to be brought to the attention of the public. I believe that it is a real contribution to medical and public health literature and that it will be valuable in doctors' offices for waiting patients to read.

M. C. D.

DR. COLWELL'S DAILY LOG FOR PHYSICIANS

A brief, simple, accurate financial record for the physician's desk. Colwell Publishing Company, Champaign, Illinois, 1943. Price, $6.00.

For many years Dr. Colwell's Daily Log for Physicians has held a place of high esteem among the readers of the review columns of the Journal, and the 1944 edition will be no exception. This volume includes all the eminent features of previous editions, and in addition contains new pay-as-you-go tax forms. Physicians will find the Comparative Income Schedule most helpful in estimating their 1944 income, and their use of the form for quarterly payments and withholding taxes will make these items a part of their permanent office records.

The 1944 Daily Log also contains a new form for nonprofessional deductions. This form is to be used for income tax data on deductible expenses, such as taxes on living quarters, which should not be included in professional expense.

This combination appointment book and bookkeeping record, with its business summary sheets and its special sections for notifiable diseases, deaths, narcotic records, and an obstetric waiting list, will be a most valuable addition to any busy doctor's office. We can recommend it without reservation to those of our readers who have not yet become acquainted with this excellent volume.

O. J. F.

PAIN

By Thomas Lewis, M.D., physician in charge of department of clinical research, University College Hospital, London; fellow of University College, London. The MacMillan Company, New York, 1942. Price, $3.00.

Dr. Lewis, in his book on pain, attempts to prove the nature and causes of pain and from what sources pain arises. It is very didactic, having few actual comparisons to the clinical types of pain as the average doctor sees them. The author is to be commended on his work; it shows much experimentation, reading of all the literature pertaining to his subject, thought, and hard work. The volume is recommended only for research workers or those interested in the theoretic side of pain.

C. A. N.

REHABILITATION OF THE WAR INJURED

A symposium edited by William Brown Doherty, M.D., and Dagobert D. Runes, Ph.D. The Philosophical Library, Inc., New York, 1943. Price, $10.00.

Among the subjects elucidated in this volume we find physiotherapy, occupational therapy, vocational guidance, legal aspects of rehabilitation, neurology and psychiatry, plastic surgery, and orthopedics. This rather formidable group of subjects receives somewhat superficial treatment for the most part. The individual reprints in many instances are those of men well versed in their field. Some of the English articles are especially interesting.

The volume is absorbing reading. Portions deal with highly technical subjects such as reconstruction of the hip, while other sections can be understood readily by the laity.

Rehabilitation of the war injured is a comprehensive field employing individuals with specialized knowledge in many different branches of endeavor. No doubt the future will see great advances by the employment of specialized groups working together to rehabilitate those injured in war. This volume is an excellent effort towards stimulating interest in this subject with the ultimate view that the maximum may be accomplished.

J. B. P.

MODERN SURGICAL TECHNIC

By Max Thorek, M.D., professor of clinical surgery, Cook County Graduate School of Medicine, attending surgeon, Cook County Hospital, surgeon-in-chief, The American Hospital, consulting surgeon, Municipal Tuberculosis Sanitarium; with foreword by Donald C. Balfour, M.D., head of section in division of surgery, The Mayo Clinic, director and professor of surgery, The Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota. Three complete volumes printed as one. J. B. Lippincott Company, Philadelphia, 1943. Price, $12.00.

There is a prodigious amount of work represented in this one-volume war edition of "Modern Surgical Technic." It covers not only all of the major surgical fields and standard procedures, but also includes the more specialized branches, such as eye and neurologic surgery. Variations of established methods are included by the author, using to the utmost the experience of other surgeons as well as his own.

It is unfortunate, however, that the exigencies of wartime limitations have necessitated the concessions made in the present publication. Presumably in order to save paper, the pages are printed in double columns, in fine print, with rather small-sized illustrations. The drawings are generous in number, since the author has great faith in them, but they have suffered a loss of clarity in this edition, especially the x-ray pictures.

The careful attention to detail in such a complete book, written to carry the interest of any reader from the neophyte to the experienced surgeon, makes the text very much worthwhile. It is conveniently grouped into three "volumes," is well indexed, and is written succinctly. Any medical library would be enriched by its inclusion.

H. M.

Woman's Auxiliary News

RED CROSS VOLUNTEER DIETITIAN'S AIDES

(Continued from page 533)

being made by the Woodbury County Red Cross Chapter at Sioux City. Other communities, it is expected, will require the service as the shortage of dietition personnel becomes more acute.

Every woman who has completed the Red Cross Standard Nutrition Course—and more than 2,000 have in Iowa—is a potential Volunteer Dietitian's Aide, eligible to enroll in the training courses in the communities where they are given.

A nation at war must guard its health. For the fighting men, wounded or ill, the Red Cross recruits registered nurses. To fill the serious gaps on the home front the Red Cross trains Volunteer Nurse's Aides. It conducts courses in Home Nursing, with the hope of having one person so trained in every household. As a further health safeguard, recognizing the factor of proper diet, the Red Cross offers to housewives courses in nutrition. And now, to meet a growing community emergency of wartime, it qualifies nutrition-trained housewives to serve as volunteers in the diet kitchens of their hospitals.

Here is home front assistance which follows the noble tradition of the Red Cross—service to others.

BOOK NOTES

FUN WITH YOUR CHILD by Mary A. Mapes is a very timely book for doctors' wives who have to be both mother and father to their children, especially in wartime. Directions and illustrations are given for making simple and inexpensive playthings for the well or the sick child. The book is based on child psychology covering all phases of development.

B. B. Crohn, M.D., a great stomach specialist, has written in the popular fashion a little book, UNDERSTAND YOUR ULCER. He answers the many questions proposed by patients with stomach ulcers by means of a readable text and fine illustrations. The preface is by W. C. Alvarez, M.D., of the Mayo Clinic.

Although it seems somewhat ambiguous to be told YOU MUST RELAX as Edmund Jacobson, M.D., recommends, nevertheless, the fact that 50,000 copies have been sold on the advice of physicians should prove its usefulness. The strain of overwork must be counter-balanced by a scientific knowledge of how to rest.

The JOURNAL
of the
Iowa State Medical Society

VOL. XXXIII DES MOINES, IOWA, DECEMBER, 1943 NO. 12

CORONARY DISEASE: ITS RECOGNITION AND MANAGEMENT*

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Coronary disease is one of the most vital problems which confront the physician today. Previously it was believed this trouble affected only the aged. Now it is known that this is not true. If coronary disease affected only persons who had lived their normal expectancy of life, this disease would not be such a serious problem. It is common now for one to observe and read in the papers of people in the prime of life who have fallen dead from this disease. This is especially true of members of the medical profession. Sometimes this disease is known and described as "the doctor's disease." The incidence of coronary disease among physicians is four times as great as it is among farmers and laborers. Many prominent members of the medical profession have succumbed to this disease. A few are John Hunter, Charcot. Nathnagel, Pepper, Saylor, Manges, McVicor and Funk. Undoubtedly, there are several in this audience today who will fall victims of this disease.

ETIOLOGY

The primary cause of atheroma of the coronary arteries or of generalized arteriosclerosis is unknown. Faulty fat metabolism has been advanced as a cause. The high incidence of coronary disease in cases of myxedema and diabetes supports the contention that disturbance of fat metabolism is a cause of coronary disease.

Hypertension sometimes is said to be a cause, mainly because of the common association of these two conditions. It is common for patients with hypertension to have coronary disease. The cause of essential hypertension is not known. Overeating, overdrinking, excessive smoking, the stress and strain of modern living, and the lack of regular rest and relaxation undoubtedly are contributing factors.

Age: Coronary disease may occur at almost any time after persons have reached the age of thirty years. In some instances the disease has affected persons who were in their twenties and in a few instances it has affected younger persons. In a series of cases reported by White,[1] the ages of the patients were as follows: less than forty years in 0.2 per cent, forty to fifty years in 6 per cent, fifty to sixty years in 22 per cent, sixty to seventy years in 44 per cent and more than seventy years in 27 per cent. In cases in which coronary disease is associated with infarction the average age of the patients is slightly less than it is in cases in which coronary disease is associated with angina.

Sex: Coronary disease is about six times as common among men as it is among women.

Occupation: The incidence of coronary disease is much higher in some occupations than it is in others. In a previous report, I[2] stated that the incidence of coronary disease is four times as high among physicians as it is among farmers and laborers. In 1,831 cases in which men registered at the Mayo Clinic, the incidence of coronary disease according to the occupation of the patients was as follows: 2.5 per cent among farmers, 2.6 per cent among laborers, 4.6 per cent among clergymen and lawyers, and 10.7 per cent among physicians.

One wonders why the incidence of coronary disease should be so high among physicians. I believe that a partial explanation is as follows: It has long been recognized that stress, strain, intensity of work and mental worry are factors in the production of coronary sclerosis. A physician's schooling is long and intensive compared with that of the average banker and business man. Undoubtedly, a physician has used up a great deal of nervous energy by the time he has finished school. The nature of the physician's work is much more strenuous; he not only has the responsibility of health but oftentimes of life itself in his hands. A

*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.
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physician's routine work, which includes ordinary obstetric cases with their complications, broken legs, severe cardiac disease, scarlet fever, diphtheria among children and pneumonia among the aged; and the responsibility of the surgeon, which is probably the greatest strain of all, is actually or nearly as intense as that of the banker when there is a run on his bank. In other words, what is a crisis for the banker and business man is more or less routine for the physician.

PATHOLOGY

The pathologic changes of coronary sclerosis are similar to those of generalized arteriosclerosis. Why the coronary arteries are so frequently involved and the rest of the arteries may be comparatively free from changes is yet unexplained. The changes may be local, patchy, or diffuse. The first changes take place in the elastic layer of the intima. These changes are slightly elevated, yellowish, longitudinal streaks. Later, these yellowish streaks change into diffuse patches with formation of connective tissue and wandering cells. This connective tissue and the wandering cells are loaded with fat. The central portion of these patches undergo hyaline degeneration. They later become necrotic. Calcification occurs and the artery becomes brittle. The intima in the affected region becomes rough. It may undergo ulceration and thrombi may form, especially if the blood stream is slowed as the result of narrowing of the lumen of the vessel.

The most common site for changes to take place is at the mouth of the anterior descending branch of the left coronary artery. Other common sites are the circumflex branches of the left coronary artery and the transverse branch of the right coronary artery. It is common for infarction to occur as a result of acute occlusion at these sites. Anterior and posterior infarction occur with about the same degree of frequency. The severity and mortality depend mainly upon the size of the artery occluded and the size of the infarct.

DIAGNOSIS

The diagnosis of coronary disease associated with angina pectoris is usually made on the basis of the history alone. I know of no disease in which it is so important to take a careful, painstaking history as it is in cases in which coronary sclerosis is associated with angina pectoris. The diagnosis is not difficult in the typical case but in some of the atypical cases the diagnosis will tax one's skill to the utmost. One cannot leave the history to an intern or resident. Electrocardiography, physical examination, and roentgenographic examination often are of little help in these instances. It may be necessary to spend one to two hours with the patient or to see him on two or three occasions before one can make the diagnosis. I know of no short cut or easy way to make the diagnosis. The most important symptom, and usually the only one, is pain. It usually is substernal. It may be substernal and precordial or it may be substernal and epigastric, but rarely is it precordial only. The pain frequently extends to one or both arms. It most often is felt on the inner sides of the arms, just above the elbow. It often is felt in the wrists or just above the wrists; it rarely occurs in the fingers. It may extend up the sides of the neck to the jaws or cheek bones.

The pain is generally described as dull, burning, vice-like, and squeezing. The patients feel as if they had something inside of them which they cannot get rid of. The pain is brought on by physical exertion and work, and it is relieved by rest. Such exertion as walking, especially after the ingestion of large meals or against a cold wind or up a hill, often will bring on the pain. Frequently excitement and anger will bring on the pain. Such excitement as witnessing a football game, listening to the broadcast of a football game or prize fight, or sexual intercourse often will bring on the pain. The pain of angina pectoris usually lasts only two to five minutes but it may last ten to fifteen. If it lasts longer than thirty minutes, one should be suspicious of coronary occlusion.

Differential Diagnosis: Coronary sclerosis associated with angina pectoris must be distinguished from pain in the wall of the thorax, intercostal neuralgia, myositis, arthritis of the spinal column, spasm or diverticulum of the esophagus, cardiospasm, diaphragmatic hernia, duodenal or gastric ulcer, gallbladder disease, functional indigestion, scalenus anticus syndrome, radicular pain and from acute coronary occlusion. It also must be distinguished from cardiac neurosis, bronchial asthma associated with bronchitis, and emphysema.

The pain of coronary sclerosis can be distinguished from pain in the thoracic wall by the site and duration of the pain and by the local tenderness. Cardiospasm and spasm of the esophagus are associated with eating or drinking and cause regurgitation of food. A diverticulum of the esophagus, gastric ulcer, and duodenal ulcer can be distinguished from coronary disease by roentgenographic examination. Disease of the gallbladder can be distinguished by the history and the roentgenologic findings. In cases of scalenus anticus syndrome, vasomotor disturbances are present in the arm and hand, and the pain is aggravated by rotation of the head and by depressing the shoulder on the affected side.

Dyspnea is a very important symptom of heart disease but in cases of mild or moderate angina

pectoris the pain often may limit the activity of the patients and thus prevent the occurrence of dyspnea. In most cases of coronary disease, however, dyspnea is more severe than it was before the coronary disease developed. In cases in which the disease is severe, dyspnea is an important symptom. A normal electrocardiogram does not rule out the presence of coronary disease. In atypical cases, the anoxemic test is of considerable diagnostic value. In this test, 10 per cent oxygen is administered for twenty minutes. If coronary disease is present, a change will occur in the S-T segment or the T wave will be inverted. If substernal pain and dyspnea should develop in the course of the test, 100 per cent oxygen should be administered immediately.

Diagnosis of Acute Coronary Occlusion: The site and extension of the pain in cases of coronary occlusion are the same as in cases of angina pectoris; however, in coronary occlusion the pain is much more severe and of much longer duration than is the pain of angina pectoris. In cases of acute coronary occlusion, the clinical picture of shock usually is present. The blood pressure usually falls, the pulse may become weak and thready and the temperature may increase to 100 or 102 degrees. Leukocytosis develops after a few hours and the sedimentation rate rises. It may take a day or so for these changes to develop. A friction rub may be heard if the infarction involves the anterior surface of the left ventricle. In acute coronary occlusion, electrocardiography is more important in establishing the diagnosis than it is in other types of heart disease.

TREATMENT

The treatment of mild coronary sclerosis consists mainly in instructing the patients to slow up in their work. They should be advised to work less strenuously and especially to work under less emotional and nervous strain and to obtain more sleep. It is advisable that they receive from ten to eleven hours of sleep a night, and they should take a long rest after the noon meal. They should avoid becoming nervously upset or angry. They should avoid eating large meals, and should rest from thirty minutes to an hour after eating. If they are overweight they should reduce their weight. They should avoid any activity which induces pain. In other words, they should be advised to live and work less intensely. As a rule, no medication is required. By following such a program, many of the patients are greatly benefited. It is thought that some patients who have mild coronary disease and who follow such a program will live longer than they would have lived if they had continued to live and work under great stress and strain, even if coronary disease had not developed.

Patients with severe coronary disease and angina pectoris should receive advice which is somewhat similar to that given to patients with mild coronary disease, the former group of patients should be advised to follow a much more rigid program. Glyceryl trinitrate (nitroglycerin) should be administered to relieve the pain. It is advisable in some instances to administer 1½ grains (0.1 gram) of aminophylline three times a day. If the patients are nervous and do not sleep properly, they should receive small doses of phenobarbital or sodium propylmethylcarbinylallylbarbiturate (seconal). Often it becomes necessary to place the patients at complete rest in bed for ten days to two weeks. It is important to instruct them how to rest. They should obtain some interesting books or listen to the radio. It is well that they have a book rest, so that they can read without any effort. If they go to bed but roll and toss and are fretful, do not relax and count the hours until they are to get up, they will not receive the benefit they would if they were able to relax thoroughly. This should be explained to them. It sometimes becomes necessary for the patients to reduce their work, change their vocation, or to discontinue their work entirely. In many instances acute coronary thrombosis will develop later.

The treatment of acute coronary occlusion is to control the pain and secure complete rest. The pain is best controlled by the administration of morphine. It should be given in doses large enough to control the pain. It may have to be given in doses of ½ grain (0.032 gram). Amyl nitrite and glyceryl trinitrate are not indicated because the blood pressure is already lowered and these drugs tend to lower it still further. I do not administer digitalis unless symptoms of heart failure are present, or unless gallop rhythm or auricular fibrillation is present. Some physicians administer quinidine in all cases of acute coronary occlusion. This is given with the idea of preventing ventricular fibrillation. I do not administer quinidine routinely in these cases. If frequent extrasystoles occur, I believe that quinidine should be administered. I believe it is dangerous to administer quinidine to patients who have large and dilated hearts. We are using more oxygen than we previously did. We usually give oxygen for pain, dyspnea, cyanosis, and restlessness. Frequently patients are much more comfortable if they receive oxygen; this can be given in a tent or by means of a mask. The patients should be kept in bed from three to six weeks, depending, of course, on the severity of the attack and the

age of the patient. I do not like to keep very old patients in bed too long. Often, these patients are allowed to sit up in a chair one week after the acute occlusion. The patients are all allowed to use a commode at the side of the bed, instead of the bedpan. I believe that, with the aid of a skilled nurse and an orderly, there is less strain on the patient when a commode is used than there is when the patient uses the bedpan. Some patients have died while using a bedpan. I do not know of any deaths which have occurred when a commode was being used. It is estimated that it requires about ninety days for an infarction to heal, but this also depends on the size of the infarction and the blood supply.

PROGNOSIS

The prognosis, of course, depends upon several factors; namely, the size of the infarction, whether or not canalization occurs or an adequate collateral circulation develops, and the general condition of the patient. Not as many patients die in the original attack as was once thought. It is believed now that from 30 to 50 per cent of the patients die of the original attack. In some cases, the heart is so severely damaged that it is incapable of carrying on its work. In a fair number of cases, proper treatment and care will permit the patients to make an excellent recovery and to continue a rather active and useful life for many years.

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THE USE OF ALLOY STEEL WIRE AS SUTURE MATERIAL*

JOHN W. DULIN, M.D., Iowa City†

Wound healing is influenced by many factors, including the materials used for ligatures and sutures. The complications of dehiscence of wounds and wound infections have remained so frequent that dissatisfaction among surgeons has been common in recent years. The relative advantages of absorbable and nonabsorbable sutures have been subjected to much study and discussion.

Catgut is still favored by surgeons who place emphasis upon absorbability as the most important factor in wound closure. This presumably advantageous property is often responsible for serious complications. The speed with which the body is able to eliminate this type of organic animal protein by absorption or extrusion through suppuration is extremely variable. In general, the surgeon hopes that the catgut maintains approximation of tissue until union has occurred. Because the tissues must first remove this foreign body protein, healing will be delayed in direct proportion to the amount of tissue inflammatory reaction necessary for elimination of this material. In addition, the aseptic foreign protein tissue response produces ideal conditions for the growth of pyogenic organisms. These frequently observed responses have resulted in many suggested modifications in the use of catgut, including alterations in the manufacture and also in its technical use. Fortunately certain body structures, such as the peritoneum, tolerate this reaction. Other tissues like fat, fascia, and glandular tissue react severely. Halsted realized some of the disadvantages of catgut.

At the present time silk is the most favored nonabsorbable suture. The scleroprotein of silk produces much less local inflammatory reaction than catgut. Cotton has recently enjoyed considerable popularity. In our experience there is a slightly greater amount of reaction around cotton than silk. Linen, like silk and cotton, has certain disadvantages not present in inorganic alloy steel wire sutures.

The use of metal sutures is not of recent origin. J. P. Mettauer and J. M. Sims nearly one hundred years ago demonstrated the value of nonirritative metallic suture in solving the closure of difficult vesicovaginal fistulas. Following Babcock's report in 1932 of the advantages of alloy steel wire, we find an increasing number of favorable reports on this suture appearing in the literature. Within the last two years valuable experimental work has been carried out by several advocates of wire sutures. Of particular importance has been the work of D. J. Preston on the physical properties of alloy steel wire. He has shown that the tensile strength of wounds sutured with wire is greater than that of those closed with silk or catgut.

In 1937 we started closing some abdominal wounds with interrupted through-and-through sutures of No. 22 B & S gauge stainless steel wire. Our technic is similar to a method described by Reid, Zinninger and Merril except that they used silver wire. This closure is used when difficulty is encountered because of the unusual abdominal distention, poor structures of the wall, probability of infection, or when a neoplasm or marked general debility is present. It is routinely used in secondary closures. The sutures are removed in about eighteen days. The great advantage of this closure is that disruptions do not occur. The chief disadvantage is the uncomfortableness of the wound and hence of the patient. We feel that this type of closure should be used in selected cases.

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*Presented before the Ninety-second Annual Session, Iowa State Medical Society, Des Moines, April 29 and 30, 1943.
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Study of wounds reopened on the wards or in the operating room at varying stages of healing is instructive. After the closure of large abdominal incisions with strong catgut, two weeks time is often not sufficient to prevent the physician from opening the entire wound with a minimal amount of traction on the wound edges. In such wounds one finds varying amounts of seropurulent material, rough, friable, grayish-white, necrotic tissue, and broken strands of the catgut undergoing disintegration. This appearance is especially common in disrupted wounds. A more marked pathologic change is noted when infection is superimposed. The first response of the body when a wound is closed with an absorbable suture material is an attempt to expel the irritating foreign substance. This reaction to organic suture material is the same as that which occurs around organic materials accidentally introduced into wounds. The difference in these two is one of degree. Certain foreign protein materials, notably silk, give rise to a less pronounced cellular response.

Because of the persistence of a relatively high wound morbidity, with the associated increased hospitalization and mortality of patients with large abdominal incisions, we started the clinical investigation of the use of buried fine alloy steel wire sutures in November, 1939. Early cases included patients on whom an artificial abdominal fecal fistula, ileostomy, or colostomy was established. Almost immediately the two most feared common serious complications, wound infections and disruptions, decreased in incidence. The improvement in wound healing was so definite that the indication for the use of wire was extended. Since January 1, 1940, all hernias on the general surgical service have been repaired with this suture material. Agnew and Dulin have previously reported the superior results obtained in the first series of inguinal hernias repaired by this method.

The tensile strength of sutures is of basic importance. Surgeons need a suture strong enough to hold the tissue edges together until healing has occurred. If one compares the tensile strength per unit of diameter for various sutures, one finds that chromic catgut is stronger than plain catgut and cotton stronger than catgut, but not as strong as silk. Wire will be found superior to all. In addition, the strength of wire does not vary. Other sutures, particularly silk, lose much of their strength as a result of heating and drying during sterilization. The strength of a suture is the strength of its weakest point, which is often the surgical knot. Various types of knots are used for the purpose of giving additional security. The ease and frequency with which plain and chromic catgut knots untie is common knowledge. Cotton and silk suture knots hold better than catgut but not as well as wire. A firmly tied wire square knot will remain intact. It should be emphasized that the superior qualities of wire which give improved wound healing are not due to its physical property of strength, but rather to the tolerance of the tissues to the wire.

Sutures of small diameter are favored. For delicate approximation sutures must be fine. For our buried sutures we use No. 32 B & S gauge, which is about the size of a fine hair. At the present time most buried sutures are No. 32 B & S gauge. We have buried heavy No. 22 B & S gauge with satisfactory results. Fine wire sutures, if placed under unnecessary tension, tend to cut through the tissue. This is not entirely a disadvantage but often an advantage. The cutting tendency prevents possible strangulation of tissue. During the tying of the knot, if much pull is placed on the suture, sufficient cutting occurs to relieve the ischemia. This is important for good healing of the tissues.

Wounds closed with buried wire are comfortable for the patients. Since the inflammatory reaction is minimal, pain is less. Tension sutures, always uncomfortable, are omitted. Because of the absence of the fear of wound disruption, the customary tight adhesive dressings and binders are omitted. The increased comfort decreases the frequent requirements of morphine. Coughing and deep breathing are much easier. The indirect result is a lowering of the incidence of pulmonary complications, phlebitis, and the like.

When wire wounds become grossly infected, even exposing the deeper layers of wire sutures, the sutures remain intact with firm healing occurring after control of the infection. These infected wounds heal much more rapidly than infected wounds closed with absorbable sutures. Wire is impermeable to organisms, differing from catgut, silk or cotton. So far we have not observed wire acting as a nidus such as silk may do. Only two patients have developed postoperative hernias in infected wounds. When a contaminated wound, such as a ruptured appendix, is closed with fine buried wire, primary union is the rule instead of the common secondary suppuration. The decrease in wound complications is followed by a decrease in mortality.

The use of wire sutures is economical. Babcock estimated that two miles cost less than one dollar. The increased rate of wound healing decreases the number of postoperative bed days formerly considered necessary. Large, uncomplicated abdominal incisions require eight to twelve days before the patients are allowed out of bed. Most patients who have had a cholecystectomy or

a subtotal gastric resection are allowed up on their eighth to tenth postoperative day. They are soon discharged from the hospital with instructions to limit their activities for three weeks and then return to their previous work.

Our indications for the use of wire have gradually extended. When steel wire is used as a skin suture without tension, tissue reaction is minimal. Even when left in the skin three or four months, as beneath casts, the wounds heal most satisfactorily. It is used in many of our plastic procedures. Encouraged by its ready adaptability and its complete tissue tolerance, a small series of anastomosis of the gastro-intestinal tract has been performed. Thyroidectomy, thoracoplasty, and radical breast amputations are followed by exceptionally satisfactory healing. At reoperation, as in stage thoracoplasties, for example, the wires when found look like new and are embedded in minimal healthy fibroblastic tissue.

The sutures are always interrupted and usually placed in a figure-of-eight manner. A square knot is tied and the ends of the suture cut close to the knot with a small wire scissors. Care must be exercised so that the cut ends of the wire will not prick the patient. This is especially important in superficial subcutaneous sutures. Short, stray ends must always be removed from the wounds for fear of migration. We have removed painful wire sutures in four instances. These were performed under local anesthesia. In each instance the sharp point occurred because of a failure to cut the sutures properly.

The surgeon will find that he cannot work as rapidly with wire at first as he can with other suture materials. Until he becomes accustomed to its peculiarities he is apt to break many sutures. The break most often occurs at a point where a kink has occurred. Short, straight pieces of wire may be propelled along fascial planes by muscular action to distant sites in the body. For this reason great care is required in keeping loose fragments out of the wound.

The possibility of a member of the operating team receiving a puncture wound of the hand is a constant danger. The perforation or tearing of rubber gloves breaks sterile technic. Within recent months one of our surgeons developed a cellulitis of an index finger after working in a septic field. The accident occurred while draining an infected total gastrectomy wound originally closed with fine wire. The infection suggested a hemolytic streptococcic cellulitis. Fortunately, with rest the process subsided without complications.

When deep infections occur, the usual superficial local signs are late in appearing, making their diagnosis more difficult. The superficial portions of the wound may be so well healed that we have feared the migration of the infection more deeply.

SUMMARY AND CONCLUSIONS

1. The use of buried alloy steel wire sutures has resulted in a marked reduction of wound infections.

2. When wire sutures are used, few cases of wound dehiscence occur.

3. During the postoperative period, wounds closed with wire show less tenderness, edema, and redness.

4. Our experience in partially or completely closing approximately 4,500 wounds with buried alloy steel wire sutures justifies the continuation to increase its use.

EXTRARENAL AZOTEMIA ASSOCIATED WITH DIABETIC ACIDOSIS*

LESLIE W. SWANSON, M.D., Mason City
CAPTAIN LEWIS E. JANUARY, M.C., A.U.S., and
CAPTAIN O. DONALD THATCHER, M.C., A.U.S.

The syndrome of extrarenal azotemia has been widely recognized and numerous case reports of the varying circumstances under which it occurs have appeared. Considerable experimental and clinical data have been collected in efforts to determine its pathogenesis. Jeghers and Bakst,[1] after a thorough review of the literature, have proposed that all cases may be explained on the basis of one or more of six fundamental mechanisms: (1) drop in blood pressure, (2) hypochloremia and hyponatremia, (3) dehydration, (4) liver damage, (5) protein catabolism, and (6) local renal disturbance. Admittedly, the pathogenesis of this syndrome is not clear in all cases.

Enough instances of extrarenal or prerenal azotemia have occurred in association with diabetic acidosis to warrant consideration of these alone in this discussion. McCance and Lawrence,[2] in their survey of azotemia associated with diabetic coma but not due to frank renal damage, concluded it to be the result of renal disorganization, the cause of which is unknown. It is not our purpose to review the literature in its entirety on the subject but rather to present and discuss two cases which we feel may provide information of value to subsequent studies on the pathogenesis of the cases in point.

CASE REPORT I

The patient, a white male twenty-seven years of age, was admitted to the University Hospital February 22, 1939, in a semicomatose condition. The only history obtainable was that he had had

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polyuria, polydipsia, polyphagia and a weight loss of fifty-five pounds in the previous year. For this he had had no medical attention. Ten days before admission a respiratory infection developed and three days later he lapsed into a coma. The coma continued in varying degree until admission. The treatment instituted during this time was not clear, but insulin was administered and orange juice and water were given orally. Vomiting and oliguria were not prominent symptoms.

The objective findings were: semicoma, extreme dehydration, rectal temperature of 100 degrees, pulse rate 120 per minute, respirations 28 per minute, no acetone odor to the breath, normal findings in the heart and lungs, blood pressure 125/85, complete reduction of Benedict's qualitative solution by urine, a trace of albuminuria, no acetone or diacetic acid in the urine, blood sugar 480 milligrams per cent, and carbon dioxide combining power of the blood 13 volumes per cent. The blood urea nitrogen was 140 milligrams per cent and the creatinine 12 milligrams per cent ten hours after admission.

The treatment instituted consisted of glucose, saline, and Hartman's solutions administered intravenously, insulin subcutaneously, and liquids as tolerated by mouth. During the first twenty-four hours in the hospital he received 6,520 cubic centimeters of fluids, 540 grams of potential dextrose, and 195 units of insulin. The urinary output was 4,430 cubic centimeters. The second day the diet was reduced to 70 grams protein, 116 grams carbohydrate, and 156 grams fat, and the insulin was reduced to 60 units. The effect upon the blood sugar, carbon dioxide combining power, urea nitrogen and creatinine are shown in Table I. He regained consciousness in eight to ten hours and continued to improve generally until discharged twenty-five days later. The diabetes was controlled with a diet of 190 grams of potential dextrose and 60 units of insulin daily.

TABLE I

Day	Blood Sugar	CO_2 Combining Power	Blood Urea Nitrogen	Blood Creatinine	Plasma Chlorides	Blood Calcium	Blood Phosphorus
1. 10:00 a. m.	480	13	...	...	...	...	...
7:00 p. m.	1,000	12	140	12	...	...	...
2. 9:00 a. m.	273	43	118 3	...	580	...	...
3. 9:00 a. m.	465	40	98	6	...	9 4	4 0
4. 9:00 a. m.	349	...	...	...	...	...	...
6. 9:00 a. m.	325	...	33 6	1 7	...	...	...
10. 9:00 a. m.	159	...	11 9	1 1	...	...	...

CASE REPORT II

The patient, a white woman twenty-nine years of age, entered the University Hospital May 15, 1939, in coma. She was known to have had diabetes mellitus for two years and severe dysmenorrhea from puberty. The diabetes had apparently been controlled with a diet of unknown composition and regular insulin 15-0-10 units daily. The dysmenorrhea in the past had caused anorexia, nausea, and occasional vomiting. She had been lax about her diet for a week before admission and with the onset of dysmenorrhea the day prior to admission she ingested no food, did not take any insulin and vomited a few times. The next morning she was irrational. Subsequent history indicated no evidence of previous renal disease.

The objective findings were: a well developed and nourished white woman in a semicomatose state with cold and clammy skin, dehydrated lips and tongue, body temperature of 99.6 degrees, pulse rate 144 beats per minute, soft eyeballs, Kussmaul type of respiration, arterial pressures 100/60, trace of albumin in the urine, complete reduction of Benedict's qualitative solution by 8 drops of urine, strong acetone and diacetic reaction in the urine, a few granular casts in the urine, blood sugar 585 milligrams per cent, carbon dioxide combining power 8.5 volumes per cent, leukocyte count 18,800, hemoglobin 12 grams, and erythrocyte count 3.9 million.

The treatment during the first twenty-four hours consisted of the parenteral administration of 190 units of regular insulin, 3,000 cubic centimeters of 10 per cent dextrose and 1,000 cubic centimeters of Hartman's solution. Within twelve hours the urine was free of acetone and the patient was conscious. The twenty-four hour urine excretion was 1,500 cubic centimeters. The blood sugar declined to 170 milligrams per cent and the carbon dioxide combining power rose to 61 volumes per cent. The blood urea nitrogen was 35 milligrams per cent and the creatinine was 1.0 milligram per cent.

Beginning with the second hospital day the patient tolerated orally a liquid diet containing protein 70 grams, carbohydrate 116 grams, and fat 156 grams. Regular insulin, 25-10-15 units, was administered. The second twenty-four hour intake was 2,800 cubic centimeters, but the urinary output declined to 90 cubic centimeters for the period and edema of the face appeared. The morning of the third hospital day vomiting reappeared and persisted for four days, the last two of which some food was retained orally. The results of the laboratory studies are summarized in Table II.

The fluid intake, urine output, and the blood electrolytes are shown in relation to the nitrogen retention in Case II. The carbon dioxide combining power was normal during this period.

The temporary renal insufficiency was shown by the decline in renal function as measured by the

TABLE II

Date	Fluid Intake (cc.)	Urine Output (cc.)	Blood Urea Nitrogen	Blood Creatinine	Blood Sugar	Plasma Chlorides	Serum Sodium	Serum Potassium
5-16-39	2800	90	35.0	1.00	170	....	...	....
5-17-39	6000	220	49.7	4.00	455	649	...	....
5-18-39	5150	800	39.2	3.75	72	655	...	....
5-19-39	3700	2200	48.3	4.25	510	620	...	....
5-20-39	4500	2875	37.8	3.00	273	625	350	17.0
5-21-39	2400	2500	....	....	...	...	341	14.3
5-22-39	1850	3300	28.0	2.50	372	...	...	....
5-23-39	2200	3800	30.8	1.80	221	...	...	....
5-24-39	2000	3800	14.0	1.40	...	...	...	....
5-25-39	2450	2800	14.0	1.00	...	...	337	14.7
6- 1-39	2450	1550	11.9	1.00	...	...	326	15.6

urea clearance. The data are shown in Table III. The gradual increase in renal function after the nitrogen retention had disappeared is also shown in the table.

TABLE III

Date	Per Cent of Normal
5-25-39	25.8
6- 1-39	42.0
6- 5-39	60.7
6- 7-39	62.0
7-31-39	94.0
8-30-40	101.0

The diabetes was easily controlled with a diet of 170 grams of potential dextrose and 25-5-15 units of insulin daily. Subsequent examinations for two years after the above episode failed to reveal any renal abnormality.

DISCUSSION

No one mechanism or group of hypothetic mechanisms has yet been proposed which can account for all instances of extrarenal azotemia occurring in association with diabetic acidosis. The circumstances under which azotemia developed in these two cases appear to be at wide variance.

In both of our cases there was dehydration, severe in Case I and mild in Case II. There was no failure of circulation or appreciable lowering of arterial pressures in either. Both suffered from at least minimal loss of chlorides from vomiting, but certainly in Case II the loss would hardly explain the azotemia while in Case I the blood chloride was within normal range twenty-four hours after admission. Protein catabolism was extremely high in Case I, but minimal in Case II. There was nothing to indicate previous renal or liver disease in either case. Blood calcium and phosphorus studies in Case I were normal.

McCance and Lawrence[2] suggested that this type of nitrogen retention might be comparable with that seen in severe Addison's disease. However, the sodium and potassium levels observed in Case II do not suggest the type of electrolyte imbalance seen in Addisonian crisis.

In Case I there was no period of oliguria, as observed in Case II. In the latter, nitrogen retention and the oliguria seemed directly related. Furthermore, in Case II the azotemia did not make its appearance until after sufficient treatment had been given to eliminate the acidosis, as determined by the carbon dioxide combining power and urinalysis for acetone bodies. This would seem to indicate that acidosis per se is not the cause of the azotemia.

The gradual return to normal of the urea clearance in Case II suggests the possibility of a selective renal dysfunction at the height of the azotemia. Whatever the pathogenesis of this disturbance, the process appears to be completely reversible provided the diabetic acidosis with its dehydration, loss of chloride, and shock can be successfully combatted by appropriate amounts of glucose, saline, and insulin, and provided it has not progressed too far.

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THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCES

CARCINOMA OF THE ANTRUM

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According to Geschickter,[1] carcinoma arising in the nasal and paranasal cavities comprise 1 to 2 per cent of cancer throughout the body. Until recently, clinical recognition of these tumors was usually late. Now, however, they are being diagnosed earlier, and with improved methods of treatment the chance of permanent cure is considerably enhanced. The following case illustrates many of the salient features of these conditions.

CASE REPORT

Chief Complaint: The patient, a white man, was first seen January 14, 1937, because of pain on the right side of the face which had begun three months before. The right cheek had become tender about one month prior to the time he presented himself for examination, and for three weeks there had been slight bleeding from the right nostril.

Family History: Irrelevant.

Past History: The patient had had a purulent discharge from the right nostril for years. He had had a stroke twenty years before which had left him with a slight weakness of the right side.

Physical Examination: The general examina-

tion showed an old gentleman with slight right-sided weakness. The teeth were in poor condition. The lungs were emphysematous. The heart was within normal limits of size and there were no adventitious sounds. The blood pressure was 142/81. The abdominal examination was negative. The rectal examination showed a few external hemorrhoids. The prostate gland was enlarged but smooth and elastic and apparently did not interfere with urination. The extremities were not notable.

Special Examination: There was marked swelling along the infra-orbital ridge and of the right lower conjunctival sac. Tenderness was pronounced over the right antrum, but there was no displacement of the right eyeball. In the right nasal cavity there was a large, dirty grayish mass filling the entire middle meatus, and much pus poured from that region. Touching the mass even with a probe caused considerable bleeding. The nasopharynx and sphenoid regions were clean but the mass extended backward toward the posterior ethmoid region.

Transillumination showed the left frontal antrum to be clear. The right frontal antrum was clear but the right antrum was completely cloudy. The eye reflexes were normal and there was no diplopia. The fundi were negative and the field of vision was normal on each side.

X-Ray Examination (By Henry G. Edstom, M.D., Roentgenologist): Examination of the sinuses showed a marked cloudiness of the right maxillary sinus and a soft tissue swelling in the region of the right ethmoid bone. There appeared to be a destructive process in the inferior orbital wall suggestive of malignant involvement. The right ethmoid bone was cloudy with some destruction of the inferior portion.

Conclusion: Probable carcinoma of right maxillary sinus with bone destruction.

Laboratory Examination: The urinalysis was essentially negative and kidney function tests were within normal limits. The blood chemical studies showed all constituents to be within normal range. An electrocardiogram indicated no cardiac pathology. The white blood cell count was 9,300, and the red blood cell count 5,000,000 with 95 per cent hemoglobin. A blood Wassermann test was negative.

Provisional Diagnosis: Probable malignancy of the antrum on the right side.

Biopsy Report: On January 15, a small piece of tissue from the right middle meatus was removed, using a snare. The pathologic report (By F. P. McNamara, M.D.) was squamous or transitional cell carcinoma, grade 4 malignancy.

Operative Notes (January 27): The patient was given a sedative of morphine and nembutal by mouth. The right cheek region was anesthetized with 2 per cent novocain solution and the nose was packed with gauze saturated with 6 per cent cocaine. The usual buccal incision used for radical surgery of the antrum was made, using the electrosurgical knife. A large portion of the lower anterior wall came away en masse. The antral cavity was filled with pus and a dirty grayish mass resembling granulation tissue. Most of the inferior bony orbital wall was gone. The cavity was cleaned out, using coagulation followed by curettage. A window from the antrum to the nose through the inferior meatus was made, using an electrosurgical loop. The inferior turbinate was left intact. Most of the right ethmoid region and the pathologic tissues in the middle meatus were removed by the electrosurgical loop and coagulation. Three capsules of radium, each containing two 12.5 milligram tubes of radium, were packed and spaced in the antrum. Three radium needles 12.5 milligrams each were inserted, one each into the anterior, middle and posterior ethmoid regions.

Two weeks later the right inferior turbinate and the entire naso-antral wall were removed under local anesthesia (6 per cent cocaine), using the electrosurgical knife and coagulation. X-ray therapy was then begun and in one week five doses, totaling 1,704 roentgens, were given (200 kilovolts—5 milliammeters—½ millimeter copper, 1 millimeter aluminum filter—60 centimeter distance).

Three weeks later the antral cavity and most of the ethmoid region were clean but a few granulations remained around the nasofrontal duct. They were removed and reported as inflammatory. There was much pus coming from the right frontal antrum. This was believed to be caused by infection, but there was also a suspicion of malignancy there; however, transillumination and roentgenograms indicated that it was not involved.

The patient was seen at weekly intervals during the remainder of 1937 and from time to time there was sequestration of thin sheets of bone from various parts of the antrum. The initial buccal incision remained open with a large opening under the cheek into the antral cavity through which a complete inspection could be made.

The postoperative inflammation of the right cheek was intense and was caused mainly by the radium and x-ray treatment. For several weeks the patient complained bitterly of neuralgic pains in the right cheek and to a lesser extent toward the right ear. This required sedatives for relief.

After March, 1937, no tissue in which malignancy was suspected appeared in any part of the cavity.

During 1938 he was seen at monthly intervals; in 1939, four times; in 1940, five times; in 1941, three times; and in 1942, once. His last visit was in March, 1943, or six years after operation. At that time the entire antral cavity and ethmoid region was healed. There was still some pus coming from the right frontal antrum, but x-ray and clinical studies indicated only chronic inflammation of the mucous membrane.

Thus, after six years and without evidence of recurrence, it is reasonable to assume that this is a cure of a grade 4 squamous cell carcinoma involving the right antrum and ethmoid region and with bone destruction of the superior and anterior lower walls of the antrum and of the ethmoid cells.

GENERAL DISCUSSION

There have been twelve instances of malignant epithelial tumors and one of myeloma of the nasopharynx or antrum in our series of cancers in the last fourteen years. Their types and clinical courses correspond in general to those 155 cases treated surgically by the Department of Laryngology and Otology at Johns Hopkins Hospital and reported by Geschickter. He classified them as follows:

Malignant Epithelial Tumors—
- Epidermal cancer
  - Keratinizing and non-keratinizing squamous cell cancer—73 cases
  - Lymphodermal cancer (lympho-epithelioma)—36 cases
- Appendage cell carcinoma—
  - Cystic basal cell cancer—15 cases
  - Adenocarcinoma (including Schneiderian cancer)—15 cases

Sarcomas—
- Lymphosarcoma—7 cases
- Melanosarcoma—2 cases
- Rhabdomyosarcoma—2 cases
- Myelomas—2 cases
- Fibrosarcomas—3 cases

It is obvious that, depending upon their origin, rate of growth, the time of metastasis and the local destructive character of the lesion, there will be many variations in the clinical picture. Sometimes the growths are without symptoms and many of them will be detected only upon a carefully conducted and systematic clinical examination of the nasal accessory sinus and the nasopharynx. In other instances the roentgenologic examination may bring the lesion to light. Any persistent although often vague feeling of pain or distress about the jaw or antrum in a patient over forty years of age should be suspected of malignancy until proved otherwise. Finally, it is axiomatic that a biopsy shall be made of any suspicious lesion in order to determine its exact nature, since this serves as a guide to treatment and prognosis.

The squamous cell or transitional cell cancers are the most common and arise in the maxilloethmoid region. They grow slowly but erode bone and invade surrounding structures. They are encountered with increasing frequency in patients over forty years of age. In Geschickter's series, twenty of the antral tumors presented in the region of the palate, fifteen in the cheek or upper jaw, and seven showed a bulging in the orbit. He stated that in most cases the outstanding symptoms were related to the intranasal tumor. The tumors growing in the nasal passages produce obstruction, interference with the voice, sense of smell, and epistaxis. Blocking of the nasolacrimal duct may cause lacrimation. Antral tumors cause swelling of the jaw, trigeminal neuralgia, and fungation or bleeding in the region of the hard palate, nose, or orbit. Loosening of the upper molar teeth is a late manifestation and exophthalmos may occur. Nasal polyps of the benign inflammatory type produced by vascular obstruction may be the first manifestation of a more deep-seated malignant growth. In the roentgenogram clouding of the antrum or of the nasal cavities, with deflection of the septum or bulging of the bony walls of the antrum, may be seen. Osseous destruction and decalcification are late signs.

Certain of these tumors tend to encroach quickly upon the meninges and important blood vessels, thus rendering the chance of successful treatment minimal. However, the majority of them are accessible to therapy and according to Geschickter, regardless of location, the presence or absence of metastases is the most important factor in curability.

Up to 1920 the prognosis of these tumors was generally hopeless, but then New[2] reported improved results following treatment of tumors of the upper jaw by means of cautery and irradiation. Since that time, this method with improvements resulting from greater experience has become the accepted form of treatment. Thus, in 1935 New and Cabot[3] reported 44.9 per cent five year cures of 118 traced patients who had primary or secondary malignant tumors of the antrum. Of patients with primary malignant tumors of the antrum, 40 per cent were alive and without evidence of recurrence five years after operation. Somewhat similar results have been obtained by

others using these same general methods.[4, 5 and 6.] It is believed that in early cases cure can be expected in 75 to 100 per cent and for all cases cures should result in 35 per cent.

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SCIENTIFIC EXHIBIT AT THE 1944 SESSION OF THE AMERICAN MEDICAL ASSOCIATION

The Scientific Exhibit at the Chicago Session of the American Medical Association, June 12 to 16, 1944, will be held at the Palmer House. Exhibits will cover all phases of medicine and the medical sciences with particular emphasis on graduate medical instruction for the physician in general practice.

Application blanks for space in the Scientific Exhibit are now available and may be obtained by communicating with the Director, Scientific Exhibit, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

DIRECTORY OF MEDICAL SPECIALISTS

Announcement is made that the Directory of Medical Specialists is now to be published by the A. N. Marquis Company of Chicago, publishers of "Who's Who in America." Previous editions have been published for the Advisory Board for Medical Specialties by the Columbia University Press of New York City.

It is planned not to issue the next edition before 1945, on account of the war, but the A. N. Marquis Company will publish a supplemental list of all those who have been certified by the American Boards since the last (1942) edition of the Directory, totaling about 3,600. This is to be distributed at cost; and monthly or bimonthly bulletins, listing successful candidates for certification at examinations during the additional interim before the next edition, are to be issued as a service to subscribers.

Dr. Paul Titus (Pittsburgh) of the American Board of Obstetrics and Gynecology will continue as the Directing Editor, and Dr. J. Stewart Rodman (Philadelphia) of the American Board of Surgery will continue as Associate Editor. The Editorial Board will be composed, as before, of the Secretaries of the fifteen American Boards.

Communications should be addressed to the Directing Editor, Directory of Medical Specialists, 919 North Michigan Avenue, Chicago 11, Illinois.

THE SIXTH ANNUAL FORUM ON ALLERGY WILL MEET IN ST. LOUIS

This international postgraduate Society was founded in 1938 at Cincinnati, Ohio, to provide a place in which to review the progress of clinical allergy, to provide in peacetimes a Forum for the younger members, and to offer intensive postgraduate instruction to physicians working in other fields. The founders were Dr. Tell Nelson of Chicago, Illinois; Dr. Karl D. Figley of Toledo, Ohio; and Dr. Jonathan Forman. Annual meetings have been held each year since: in Toledo, Ohio, in 1939; in Chicago, Illinois, in 1940; in Indianapolis, Indiana, in 1941; in Detroit, Michigan, in 1942; and in Cleveland, Ohio, in 1943.

In 1940 the name was changed to correspond to the international character of its attendance and the Forum's Gold Medal and annual oration were established as a means of recognizing outstanding contributions to clinical allergy. The first recipient was Bela Schick of New York City, who introduced the word "allergy"; the second was W. W. Duke of Kansas City; the third, Arthur F. Coca of New York City; and this year the award goes to Robert A. Cooke, also of New York City.

The Sixth Annual Forum on Allergy will be held in the Statler Hotel, St. Louis, Missouri, on Saturday and Sunday, January 22 and 23, 1944. This is a meeting to which all reputable physicians are most welcome, and where they are offered an opportunity to bring themselves up to date in this rapidly advancing branch of medicine by two days of intensive postgraduate instruction. For instance, the fifteen study groups, any three of which are open to him, are so divided that those dealing with ophthalmology, and otolaryngology, pediatrics, internal medicine, dermatology, and allergy run consecutively. In addition the study groups are arranged on the basis of previous registration. In this way, as soon as the registrations are completed, the registrant is expected to write the group leader and tell him just what questions he wants brought up in the discussion. Attention is also called to the fact that during these last two days almost every type of instructional method is employed; such as special lectures by outstanding authorities, study groups, pictures, demonstrations, symposia and panel discussions.

Although the program is most intense, informality and an emphasis on the practical marks the conduct of the whole meeting. Good fellowship at luncheon, dinner, and smoker reigns throughout the two days. The meeting offers an exceptionally fine opportunity to meet and to come to know many distinguished authorities in this rapidly advancing but new field of medicine. The Forum is proud of the program which it is to present this year.

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STATE DEPARTMENT OF HEALTH

Walter L. Bierring

"Peace on Earth, Good Will toward Man"

LEON H. FLANCHER, M.D., M.P.H.
Director, Division of Tuberculosis

"Peace on Earth, Good Will toward Man," is a phrase as old as the Bible. As the birthday of our Saviour approaches, we think more and more of this sentiment, and yet today instead of Peace we have war, famine, and desolation on the face of the Earth. Instead of "Good will toward man," we have death, hatred, and jealousy among the nations of the world. Nevertheless, we still have many things to be thankful for in our own United States. We have our Liberty, our Homes, our Freedom of Speech, our right to Worship when and where we will, and a country removed from the ravages of war. We can indeed be thankful for the joyous Christmas Season with its cheerful Christmas Seal to remind us that although we have a war to fight against a foreign enemy, we have a war of our own to wage against a silent and insidious foe in our own midst—TUBERCULOSIS.

Never in the history of medicine have we had a better chance to defeat this disease than we have at the present time. All our forces are organized —military, state, and civilian—to wage a relentless warfare, and never have we more needed all these forces than at the present time. As always during a war, death rates move slowly upward and this one is no exception—1942 shows a higher death rate than 1941. What will the 1943 death rate be?

The Selective Service is doing wonderful work in discovering tuberculosis, but in spite of this many cases of tuberculosis are being found in the army every day. Many of those who are found to be infected, instead of treating their disease, are lured by high wages to enter war work in industry, thus spreading the disease.

Our civilian physician and nursing staffs are being depleted every day by the demands of the armed forces; those which remain are overworked and cannot devote their full attention to this necessary work as in peacetime. However, progress is being made, and hearty cooperation is given by the civilian doctors in the case-finding program to discover tuberculosis. In the Mantoux testing of all contacts and suspects, free tuberculin is furnished for this very important test by the State Department of Health.

Industry is cooperating with the Department of Health in its Five-Point Industrial Hygiene Program, which includes a survey of its employees by the miniature or 35 millimeter film. All patients in whom pathology is noted on the small film are advised to have a conventional 14x17 film made for diagnostic purposes. This entire program is being carried out with the approval of the local county medical societies.

The 35 millimeter film is also used in the high schools in some counties to locate new sources of contact. The student whose film is found to contain pathology is Mantoux tested by the family physician, together with all the members of his family, and a 14x17 x-ray film is made of all positive reactors for the purpose of diagnosis.

The Christmas Seal Organization of the Iowa Tuberculosis Association is doing a wonderful piece of work in cooperating with this program. Never before has the tiny seal meant so much or been able to do more than at present. The purchase of Christmas Seals means as much in the war against tuberculosis as the purchase of a War Bond does in our fight for freedom.

The Department of Health wishes to thank the medical profession for its full-hearted cooperation in carrying out the program against tuberculosis.

We trust that before another year has come to pass that we can say and live with its true and rightful meaning—"Peace on Earth, Good Will toward Man."

POLIOMYELITIS REMAINS AN ENIGMA*

Some five years ago Lumsden, who is a hard-bitten epidemiologist of the realistic school, active in field work and incisive in his thinking, presented a paper entitled *Poliomyelitis: Facts and Fallacies.* He opened his paper with this significant quotation: *"'What Is Truth?' asked Pontius Pilate, and did not tarry for an answer."* He closed it convinced that not only was the then existing knowledge of poliomyelitis insufficient to permit a statement as to mode of transmission but so meager as to demand continuing exhaustive and intensive research. More recently the same author reviews poliomyelitis in *Texas Reports on Biology and Medicine* and again cautions against authoritarian opinions and deprecates premature conclusions. The articles in question are well worth study and the subject demands serious thought.

Since Lumsden's frank avowal of the limitations of knowledge as to poliomyelitis, no inconsiderable amount of research has been carried on, particularly in relation to the means of transmission of the disease. Reports of the presence of the virus in stools, in sewage, in flies, in a mouse, have stimulated further investigations and speculations; and more and more there is questioning of the correctness of statements as to *source of infection and mode of transmission* of poliomyelitis as set forth in the American Public Health Association's *Control of Communicable Diseases.* Officially, as it were, the source of infection is essentially the nose and throat discharges of infected persons and carriers, "or articles recently soiled therewith"; and as to mode of transmission, it is laid down that "the virus enters the brain by way of the olfactory nerves and bulb when introduced into the nose or nasopharynx of a susceptible person, presumably from a carrier in most instances."

Thus today, with a poliomyelitis season just ending (we hope), the epidemiologist is not much further along than he was two decades ago. Actually, but scant new epidemiological knowledge has been forthcoming. The presence of virus in flies is not truly new, for Rosenau and Brues, and Frost and Anderson more than twenty years ago reported the development of what they believed to be poliomyelitis in monkeys bitten by stable flies. As regards the presence of Poliomyelitis virus in human excreta, Kling, *et al.,* in 1912, and Wilbur A. Sawyer, in 1915, reported this. Jungeblut's paper which appeared in the February, 1943, issue of the *Journal,* reported recovery of poliomyelitis virus from a mouse found dead in a home where there had just been a fatal case of poliomyelitis. This is a new note in the search for knowledge but its epidemiological significance cannot be completely interpreted at this time.

Viewed historically, one sees in the present epidemiological gropings in poliomyelitis many characters and gestures similar to those that have occurred in the past, particularly in relation to the yellow fever situation toward the end of the last century. One sees a general tendency to hang on the respectable-with-age concept of person-to-person transmission, and also there are some non-contagionists. There are found, too, the typical authoritarians who tend to lay down the law with one hand and excommunicate non-believers with the other, and there are the rebels who invite this wrath. One finds in addition the full gamut of old arguments with insistent emphasis on one special feature or another: On constitution and diatheses, on lines of population movement, on the significance of geographic distribution, and the implications of season, temperature, humidity; upon the meaning of attack rates by age, by sex, by race, and rural and urban; on water, milk, human excreta, beasts and birds and insects. Is there somewhere a Carlos Finlay waiting for a Walter Reed, or a pump-handle waiting for a modern John Snow?

All in all, the situation strongly suggests a leanness of interpretable facts and a fatness of hard-headed opinions. In such circumstances only the open-minded may claim epidemiologic respectability and they, unlike Pontius Pilate, must tarry for an answer; unashamed to admit ignorance, unawed by authoritarian edicts, persistent and diligent in the search for truth.

*From the November, 1943, issue of the American Journal of Public Health, pp. 1358-1359, H. S. Mustard, M.D., Editor.

PREVALENCE OF DISEASE

Disease	Oct. '43	Sept. '43	Oct. '42	Most Cases Reported From
Diphtheria	14	34	11	Woodbury
Scarlet Fever	245	109	174	For the State
Typhoid Fever	6	4	4	For the State
Smallpox	1	0	5	Page
Measles	35	15	55	Allamakee, Buchanan
Whooping Cough	105	152	84	For the State
Brucellosis	51	21	25	For the State
Chickenpox	119	10	90	Boone, Cass, Story, Washington, Woodbury
German Measles	1	2	4	Johnson
Influenza	0	2	12	None
Malaria	3	5	1	Allamakee, Pocahontas, Polk
Mumps	48	16	95	Floyd, Polk, Pottawattamie
Pneumonia	26	11	43	For the State
Poliomyelitis	44	107	16	Greene, Muscatine, Wright
Tuberculosis	33	26	73	For the State

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

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OFFICE OF PUBLICATION, DES MOINES 9, IOWA

Vol. XXXIII DECEMBER, 1943 No. 12

IOWA PLAN FOR COMBATTING VENEREAL DISEASE IN OPERATION

The first decentralized program of five-day treatment of syphilis has been started in Iowa. Centers have been established on a local basis at Broadlawns General Hospital, Des Moines, University Hospitals, Iowa City, and St. Joseph Mercy Hospital, Sioux City. Treatment of both male and female patients is to be carried out in cooperation with practicing physicians and health officers who way refer for treatment patients with early cases of infectious syphilis (under two years' duration) or those infected with gonorrhea. Following completion of treatment all patients will be returned to the referring physician with recommendations for continued observation.

Since 1939, five-day treatment of syphilis has been carried out at Broadlawns General Hospital, which is known as one of the early centers. This plan represents an expansion of such facilities in an attempt to serve the needs of a larger part of Iowa. Funds for this purpose have been received from those set aside by the Lanham Act and payment will be made for services performed on a local basis.

Any physician or health officer wishing to send a patient to the nearest center should communicate by letter, wire, or phone with the Sioux City Health Department, Broadlawns General Hospital, Des Moines, or Mr. Robert E. Neff, University Hospitals, Iowa City. As a part of the original communication, a statement should be made as to the ability of the patient to furnish transportation. In cases where transportation is impossible because of indigency, the State Department of Health will furnish such transportation on request with the application for admission.

This plan represents the first state-wide, decentralized program in the United States, and has several advantages. Existing personnel and facilities are used, patients will be nearer their homes, physicians and health officers can maintain closer contact with treating physicians, and each community will be able to continue this program after the war. Such centers will be of value in increasing locally our knowledge of new advances in the treatment of syphilis as well as offering the possibility of aiding in the introduction of new, accepted methods of treatment. Should penicillin become available for cases of gonorrhea and prove valuable for early syphilis, its use is contemplated.

There is to be no distinction as to race or financial status and no charge will be made for any services. Patients are expected to represent a cross section of the population of Iowa, although certain indigent and ill-adjusted persons will be afforded an opportunity through rehabilitation, following cure, to engage in useful employment.

To date, five thousand or more patients with syphilis have been treated by the five-day method and results usually have been good with few reactions. This mode of treatment requires hospitalization, careful medical and nursing supervision, intravenous and other equipment. Such facilities are rapidly becoming more widely available in the Midwest with centers in the following cities representing their respective states: Omaha, St. Louis, Chicago, Indianapolis, and Denver. It is hoped that Iowa's plan will offer wider localization.

AMPUTATION UNDER REFRIGERATION ANESTHESIA

A new surgical technic which seems to have demonstrated its usefulness beyond question involves the use of refrigeration for the anesthetic. Mock and Mock, Jr., describe the process in the September 4 issue of *The Journal of the American Medical Association.* In the main, the method has been employed in cases of diabetic gangrene and in cases of trauma to limbs where amputation is indicated. Many advantages are cited. Shock is completely eliminated. Diabetic patients carry on without missing a meal, and the diet and insulin regime can remain in status quo.

"In severe crushing injuries of an extremity or other injuries with complications necessitating amputation," say the authors, "refrigeration will inhibit infection and limit the absorption of histotoxins, thus helping to overcome shock, and will give time for infusions of plasma, blood or fluids and other necessary preparatory measures. With refrigeration the amputation may be delayed until life threatening associated injuries or complications have been conquered. Finally,

under refrigeration anesthesia the extremity may be amputated at the selected site without further shocking the patient."

Several methods of producing the refrigeration are available. The limb may be immersed in ice water, or pure gum rubber ice bags may be employed. Packing in cracked ice is an inexpensive, effective measure and is the one used by the authors. Mechanical contrivances with thermostatic control are best but they are expensive.

The time required for producing anesthesia suitable for amputation varies, but in general requires two and a half to three hours. A tourniquet is always applied so that circulation of blood in the extremity is prevented, and refrigeration must always be induced above the site of the tourniquet. Healing of the stump has occurred as rapidly as with other types of anesthesia unless infection has been a factor.

Refrigeration anesthesia has yielded a surprisingly low mortality rate where ordinarily it might have been expected to be high. In one series of 101 patients reported from the New York City Hospital it was fifteen per cent. Forty-seven of these patients were diabetic with an average age of sixty-five years. Among them the mortality rate was twenty-one per cent. In these times when such spectacular achievements are being scored by the sulfonamides and penicillin, it is easy to overlook this unique life-saving measure developing in another field.

ANNUAL CONFERENCE OF SECRETARIES AND EDITORS

Each year the secretaries and editors of the forty-eight constituent state medical associations are called together in Chicago to discuss problems of mutual interest. This year the conference was held November 19 and 20 at the American Medical Association building with a large group of doctors in attendance. Dr. Roger I. Lee, chairman of the Board of Trustees of the American Medical Association, made a few remarks of welcome, and Dr. John S. Bouslog, secretary of the Colorado State Medical Society, was selected as presiding officer.

Dr. James E. Paullin, president of the American Medical Association, told of the work being done in postgraduate education for men in service, and stressed the need for postwar planning committees to deal with the problems which will arise when doctors return to civilian life. In this connection he mentioned the fact that there will be some 20,000 doctors who have never engaged in civilian practice, having gone directly into the army or navy on graduation, and emphasized the need for getting an equitable distribution of doctors after the war so that rural areas do not suffer.

Dr. Paullin was followed by Dr. George F. Lull, Deputy Surgeon General, United States Army, who spoke on problems relating to assignment of duties to military surgeons. Dr. Lull said that in the last few weeks the army has discharged more doctors than it has taken into service, so that there are a few coming back into civilian practice, but he emphasized the need for about 7,000 more physicians for the armed forces. He mentioned the difference between civilian and military practice of medicine, the fact that the teachings of the last war are not applicable in this one, and that postwar refresher courses for men in service will be helpful before they return to civilian practice, but he said that the men who have never been in private practice are learning something useful from their army experience. He also mentioned the difference in the type of warfare in the different combat areas, and the different medical problems arising. Malaria is one enemy common to both the North Africa and South Pacific armies.

Dr. Victor Johnson, new secretary of the Council on Medical Education and Hospitals, gave the final talk of the morning session. His subject was hospital training of medical graduates, but his talk covered many points. He gave a brief history of the origin of the American Medical Association, and its early decision to elevate the standard of medical education. Dr. Johnson followed the adherence to this principle from 1847 to the present time, and then discussed the present accelerated program of medical education. It was his feeling that undergraduate medical training is the only feature of the accelerated program likely to be retained after the war. He said that it would be possible to allow adequate vacations, to have annual admissions of students and the desired number of students with such a timing, and yet cut down the actual time required for medical education. However, accelerated internship is undesirable as a permanent part of a medical program. He said that the present reduction of standards in medical education is due to factors other than the accelerated program itself, and he mentioned the shortage of teaching faculties as one of the most responsible factors.

Dr. Herman L. Kretschmer, president-elect of the American Medical Association, opened the afternoon meeting. In discussing the Wagner-Murray-Dingell Bill, he said every doctor should devote several hours' time to studying the bill and should make every effort to spread the gospel concerning it.

Dr. Harold S. Diehl spoke on Procurement and

Assignment problems, saying the armed forces need between six and seven thousand physicians, and that many could be spared from certain areas. He said no community should hoard physicians and no physician should evade his responsibility. The old problems of relocating physicians and of getting available physicians into service still exist. Commander Lapham, following Dr. Diehl, said there was very little hope of getting many physicians from those declared available. Although the Procurement and Assignment Service is working on it, it still lacks power. He said there had been 2,100 relocations up to the present time, due to the work of the state committees. He also discussed the place of the physically disqualified physician.

Dr. Walter F. Donaldson said the War Participation Committee and the Procurement and Assignment Committee should not be identical because the latter committee had already done its full share of work and undoubtedly was tired. He felt each state should have a War Participation Committee which could do a lot of leg work for the Procurement and Assignment chairman, that new faces would aid in smoking out men who should apply for a commission. He said war participation meant doing anything that will contribute to winning the war, and as some of the activities he suggested maintenance of the war records of physicians in each county medical society, preservation of good public relations, guardianship of the interests of the servicemen and their families. One specific morale builder he suggested was that of giving a Christmas party to which the wives of men in service would be invited.

The final paper of the Friday session was given by Dr. Louis H. Bauer, chairman of the new Council on Medical Service and Public Relations of the American Medical Association. Dr. Bauer listed the functions of the Council as set forth by the House of Delegates in June, and announced the appointment of Dr. George Lombard Kelly, Augusta, Georgia, as its secretary. He said the Council had met several times since its creation in June, and that every member was overwhelmed by the magnitude of the task ahead of it. He promised that it would not be ultra-conservative, nor ultra-radical, and that it would accomplish no miracles overnight. Ten per cent of the people in the United States have hospital insurance and are prospects for voluntary medical care plans. The Council is making a careful study of the various medical care plans and hopes to be able to set forth some principles for the guidance of state societies wishing to inaugurate such plans. The industrial plans such as the Kaiser plan may be the answer for certain mushroom industrial centers, but they certainly are not the answer for rural areas, nor do they care for the family of the worker. The Council hopes to offer a plan that is in accord with American standards of medical care and the principle of free enterprise.

Dr. Bauer went into some detail about the organization of the Bureau, stating that it would utilize and expand present sources of information, keep in close contact with state and county societies through more frequent bulletins, and that it would try to reach each individual doctor.

Most of the secretaries, as well as the editors, attended the dinner Friday evening, following which Dr. Austin E. Smith, secretary of the Council on Pharmacy and Chemistry of the American Medical Association, gave a clear and concise picture of the workings of the Council. Comments on the work of the Council led to an open discussion of the Cooperative Medical Advertising Bureau, the amount of advertising it is procuring for the state journals, the policy followed in accepting advertisements, and its relation to the American Medical Association.

Mr. J. W. Holloway of the Bureau of Legal Medicine and Legislation opened the Saturday morning session with a brief analysis of medical legislation in Congress, mentioning the Tolan Bill, the Wagner Bill, the Barden LaFollette Bill, the appropriation bill which would have provided funds for relocating physicians, and the appropriations for emergency maternity and infant care. In connection with the latter, he repeated that the program had not been set up by legislation, but was the result of appropriations, starting with $380,000 in 1941, $7,500,000 in 1942, and $23,000,000 in 1943. The recommendation of the House of Delegates that the allotment be paid to the serviceman's wife was also mentioned, and the rest of the discussion left to Dr. Foster of Michigan.

Dr. Foster stated it would have been better for everyone concerned to have gotten together and worked out a uniform plan before it went into effect rather than to get together now. However, the plan is in operation, and he raised the question of whether it was not a trial balloon for the socialization of all medical care. He questioned the sincerity of purpose of the program, and suspected sharp practice in the wholesale, premature publicity concerning it. No program, however worthy, can survive if founded on bad faith and a lack of confidence. The Michigan Society has refused to cooperate and has asked the doctors to give free care to the women so that

they can get free hospitalization. He enumerated ten points brought out in the discussion of the plan in Michigan, and then called on Dr. Daily of the Children's Bureau.

Dr. Daily said the attorney for the Children's Bureau had ruled that the money would have to be paid direct to the doctor rather than in the form of an allotment to the serviceman's family.

Dr. W. W. Bauer of the American Medical Association was then asked to speak to the group and he explained that the Children's Bureau had not asked the American Medical Association to appoint a member to the Advisory Committee, but that he personally had been appointed to that body. He said the Advisory Committee feels its relationship to the Children's Bureau is inadequate, and the members feel they do not represent practicing physicians. They have recommended that additional representatives from the practice of medicine be included on the committee, but no action has been taken in that direction.

Dr. Kress of California spoke next, saying that the California Medical Association has approved the principle of caring for servicemen's wives during pregnancy, but it was left to each individual physician to determine his course of action. He also gave a history of the program in California and mentioned the meeting of the five western states to determine their course of action.

Dr. Bierring said the public health officers of the country were opposed to the plan as it was set up and had asked for changes. He cited the lack of equality in the different states, and also brought out the fact that hospitals are paid on the basis of cost, whereas the medical fee is set at a certain figure regardless of complications.

Dr. Fishbein said the technic employed by the members of the Children's Bureau is designed to achieve their ends. They selected an Advisory Committee which has a preponderance of sentiment leaning toward their objectives, and it does not represent the medical profession of the United States. He said Dr. Bauer did not have the right nor privilege of reporting what is done at meetings of the Advisory Committee, and that publicity is never given until it is too late to organize any opposition to the plans. He said the same pattern ran through the Wagner-Murray Bill, a pattern of autocracy for democracy. The Children's Bureau opposes any attempt to coordinate health activities. Even the President of the United States was unable to transfer the health work of the Children's Bureau into the Social Security program. The medical profession has been between Scylla and Charybdis in the program for the enlisted man in time of war, but he said there seemed to be a hopeful sign in a growing resentment in the country toward continued governmental encroachment on private enterprise.

Several other physicians spoke on the same subject, but no official action was taken and the conference closed about noon Saturday.

TEN SUCCESSFUL MEETINGS

Last month your editor commented on the ten meetings which our president had planned for the physicians of Iowa during the first two weeks of November. These meetings have now been held, and it is no overstatement to say they were a tremendous success. The large attendance at each of them proves that Iowa physicians are interested in what lies ahead for the practice of medicine, and that they will take time to go and listen to scientific and economic talks on matters of such importance.

The most striking thing about these meetings was the willingness of all who were asked to help to do so to the full extent of their ability. Reports coming in to the central office indicate a most careful preparation of all talks, and an enthusiasm on the part of the local chairmen and presiding officers. Without exception, the comments on the scientific papers speak of their high quality and good presentation; and there has been nothing but praise for the manner in which the economic speakers dealt with their subjects.

Dr. Woodward had a good idea when he planned these meetings; the doctors who helped him saw the vision and helped translate it for the benefit of all doctors in Iowa.

AMERICAN MEDICAL ASSOCIATION COUNCIL ON MEDICAL SERVICE AND PUBLIC RELATIONS

The Council has authorized the publication of the following statement.—J. W. Holloway, Jr., Acting Secretary.

A Statement of General Policies

Pursuant to carrying out the duties imposed on it by the House of Delegates, the Council has adopted the following general policies:

1. The Council on Medical Service and Public Relations recognizes the desirability of widespread distribution of the benefits of medical science; it encourages evolution in the methods of administering medical care, subject to the basic principles necessary to the maintenance of scientific standards and the quality of the service rendered.

It is not in the public interest that the removal of economic barriers to medical science should be utilized as a subterfuge to overturn the whole order of medical practice. Removal of economic barriers should be an object in itself.

It is in the public interest that the standards of medical education be constantly raised, that medical research be constantly increased and that graduate and postgraduate medical education be ener-

getically developed. Curative medicine, preventive medicine, public health medicine, research medicine, and medical education, all are indispensable factors in promoting the health, comfort and happiness of the nation.

2. The Council through its executive committee and secretary shall analyze proposed legislation affecting medical service. Its officers are instructed to provide advice to the various state medical organizations as well as to legislative committees concerning the effects of the proposed legislation. It shall likewise be the duty of its officers to offer constructive suggestions to bureaus and legislative committees on the subject of medical service.

3. The Council approves the principle of voluntary hospital insurance programs but disapproves the inclusion of medical services in those contracts for the reasons adopted by the House of Delegates at the 1943 meeting.

4. The Council approves voluntary prepayment medical service under the control of state and county medical societies in accordance with the principles adopted by the House of Delegates in 1938. The medical profession has always been very much opposed to compulsory health insurance because (1) it does not reach the unemployed class, (2) it results in a bureaucratic control of medicine, and interposes a third party between the physician and the patient, (3) it results in mass medicine which is neither art nor science, (4) it is inordinately expensive, and (5) regulations, red tape and interference render good medical care impossible. Propaganda to the contrary notwithstanding, organized medicine in general, and the American Medical Association in particular have never opposed group medicine, prepayment or non-prepayment, as such. The American Medical Association and the medical profession as a whole have opposed any scheme which on the face of it renders good medical care impossible. That group medicine has not been opposed as such is evidenced by the fact that there are many groups operating in the United States which have the approval of the medical profession, and members of these groups are and have been officials in the national and state medical organizations. That group medicine is the Utopia for the whole population, however, is not probable. It may be and possibly is the answer for certain communities and certain industrial groups if the medical groups are so organized and operated as to deliver good medical care.

5. The Council believes that many emergency measures now in force should cease following the end of hostilities.

6. The Council believes that the medical profession should attempt to establish the most cordial relationships possible with allied professions.

7. There is no official affiliation between the American Medical Association and the National Physicians Committee. However, since it is the purpose of the National Physicians Committee to enlighten the public concerning contributions which American medicine has made and is making in behalf of the individual and the nation as a whole, it is the opinion of the Council that the medical profession may well support the activities of the National Physicians Committee and other organizations of like aims.

8. American medicine and this Council owe a responsibility to our colleagues who are making personal sacrifices to answer the call of the armed forces. Therefore, the Council expresses the desire to cooperate with the medical committee on postwar planning in order to assist our colleagues in reestablishing themselves in the practice of medicine, and in the preservation of the American system of medicine.

The Wagner-Murray-Dingell Bill*

The legislation introduced in the United States Senate, June 3, 1943, by Senator Wagner and Senator Murray as S. 1161 and in the House of Representatives by Congressman Dingell as H. R. 2861 proposes radical amendments to the Social Security Act. Others have characterized it as "fantastic in scope, idealistic in objective and extremely expensive in its economic aspect."

The Council reserves judgment on the amendments proposed that are not directly concerned with medical care. Concern must be expressed, however, over the effect on the health of the people of that part of the legislation that undertakes to create a federally controlled system of compulsory sickness insurance to include an estimated 110,000,000 wage earners, self-employed persons and the dependents of both classes. Such a system would be created by section 11, which proposes to amend title IX of the Social Security Act to provide "Federal, Medical, Hospitalization, and Related Benefits."

By a revolutionary process, the enactment of section 11 would undermine and destroy the American system of medicine that has developed in an evolutionary healthful manner over the entire period of the history of medicine in the United States.

American medicine has developed an unexcelled quality of medical education. The enactment of section 11 would break down our system of medical education. It would remove the incentive that stimulates the student to acquire the best medical education obtainable by offering that student a regimented practice, federally supervised and controlled. This result the sponsors of the legislation inferentially apprehend by including a provision for federal grants-in-aid to stimulate medical education.

American medicine has made available to the people an unexcelled quality of medical care. The enactment of section 11 would attenuate the quality of medical care available to the people by imposing on physicians conditions of practice under which good medical care could not possibly be rendered. Medical practice would deteriorate from a highly personalized professional service to an impersonal, regimented service.

American medicine has produced unexcelled medical research by individuals. The enactment of section 11 would lessen the incentive for individual medical research by making it impossible for the results of that research to be utilized to their fullest extent. This result the sponsors of the legislation inferentially apprehend by providing for federal grants to *nonprofit institutions and agencies* to encourage and promote research.

American medicine has been responsible for a state of health of the people unexcelled in any other country. The enactment of section 11 would result in a deterioration of the health of the people, for if medical education suffers, if the quality of medical care available to the people becomes attenuated, if the incentive to individual medical research is removed, the resulting harmful effect on the health of the people will be inescapable.

WHAT DOES SECTION 11 PROPOSE?

Section 11 proposes to amend title IX of the Social Security Act to provide general medical, special medical, laboratory and hospitalization benefits to every person currently insured under the act, to the wives and children of such persons and to certain other groups who may voluntarily bring themselves within the coverage of the act.

To provide these benefits, the Surgeon General of

*Reprinted from The Journal of the American Medical Association.

the United States Public Health Service would be authorized to make all necessary arrangements. He would, in effect, become the autocrat of American medicine. Although every physician legally qualified by a state may, if he consents to regimentation, participate in this compulsory health insurance scheme, the Surgeon General may by regulation prescribe the conditions of participation. He too would be authorized to determine what compensation the participating physicians may receive and would have the final say as to the manner in which they will be compensated, whether on the basis of fees for services rendered, on a per capita basis, on a salary basis or on any combination or modification of these bases. He would be authorized to limit the number of insured persons a particular physician may treat. He would be authorized to determine what constitutes the services of a specialist.

Ostensibly to assist the Surgeon General there will be created a National Advisory Medical and Hospital Council to be appointed by the Surgeon General, of which he will himself be chairman. This council will have no authority; it will be authorized only to "advise." While an insured individual may select, normally, from the list of participating general practitioners the physician to treat him, he will be denied that privilege if the physician's quota of patients, as established by the Surgeon General, is already filled. If he is in need of the services of a specialist, he will have no voice in the selection of that specialist. The Surgeon General may arbitrarily assign an insured person to a particular physician if such person does not make his own selection.

The bill provides that in each area the provision of general medical benefit for all insured persons shall be a "collective responsibility of all qualified general practitioners in the area who have undertaken to furnish such benefit." The significance of this provision is difficult to determine. It may signify that each participating physician will be responsible for the quality of medical service rendered by every other participating physician in that particular area.

The Surgeon General would be authorized to determine what hospitals may participate in the scheme. Hospital benefits will range from $3 to $6 for each day of hospitalization, not in excess of thirty days, as determined by the Surgeon General with the approval of the Social Security Board. The rates will range from $1.50 to $4 for each day of hospitalization over thirty but not exceeding ninety. If the insured is placed in an institution for the care of the "chronic sick" the rate will range from $1.50 to $3 a day. Instead of making such payments to the insured individual, the Surgeon General, subject to the approval of the Social Security Board, may make contracts with participating hospitals for the payment of the reasonable cost of hospital service at rates neither less than the minimum nor more than the maximum rates specified, such payment to be full reimbursement for the cost of essential hospital services, including the use of ward or other least expensive facilities compatible with the proper care of the patient.

Insured persons will also be entitled to certain laboratory and other benefits, the nature and extent of which will be determined by the Surgeon General but which will include chemical, bacteriologic, pathologic, diagnostic and therapeutic x-ray and related laboratory services, physical therapy, special appliances prescribed by physicians, and eye glasses prescribed by a physician or other legally qualified practitioner.

TAXES TO PROVIDE BENEFITS

To finance the provisions of this bill, each included employer will be taxed annually at the rate of 6 per cent of his payroll, excluding all remuneration paid to an employee in excess of $3,000 a year, and each insured employee will be taxed 6 per cent annually of the wages received up to $3,000. Self-employed persons will be required to pay 7 per cent of the market value of their services annually up to $3,000. States and political subdivisions and their employees will be taxed at the rate of 3.5 per cent up to $3,000 if such governmental units voluntarily, by compacts, come within the coverage of the Social Security Act.

Of this total tax a certain amount will be credited to a "Medical Care and Hospitalization Account," an amount estimated as in excess of $3,000,000,000 annually.

GRANTS-IN-AID

Section 12 of the bill, as previously indicated, provides grants-in-aid as a stimulus for medical education, research and for the prevention of disease and disability, in apparent recognition that the enactment of the bill will require such a stimulus. The Surgeon General of the Public Health Service will determine who will be the recipients of such grants and the specific amounts that will be granted. He will determine too whether a particular project is worthy of stimulation.

The enactment of this bill will destroy the private practice of medicine. It will create a political system of medicine dictated by a federal bureaucracy. It will lower the high health level of the people of the United States. Its enactment should be vigorously opposed.

IOWA'S COMMITTEE ON MEDICAL SERVICE AND PUBLIC RELATIONS

The House of Delegates of the Iowa State Medical Society, at its meeting in April, authorized its delegates to ask for the formation of a Council on Medical Service of the American Medical Association. This was done and a new Council on Medical Service and Public Relations was set up by the American Medical Association at the June meeting of the House of Delegates, with Dr. Louis H. Bauer of New York as chairman. The Council has had several meetings and has selected Dr. George Lombard Kelly of Georgia for its secretary. Dr. Kelly will assume his new duties January 1, and the Council should then be able to function more easily.

Each state has been asked to set up a similar committee to function on a state level, and Dr. Woodward, president of the Iowa State Medical Society, has appointed the following doctors to serve in that capacity: Dr. R. D. Bernard of Clarion, chairman; Dr. M. C. Hennessy of Council Bluffs, Dr. John A. Thorson of Dubuque, Dr. Ira N. Crow of Fairfield, Dr. Martin I. Olsen of Des Moines, and Dr. Fred Sternagel of West Des Moines. It is the hope of the chairman of this committee that immediate work can be begun in Iowa, particularly with reference to the Wagner-Murray Bill.

THE TIME IS NOW!

WHAT MUST BE DONE, IF THE MEDICAL PROFESSION IS TO FULFILL ITS FUNDAMENTAL OBLIGATION TO THE AMERICAN PEOPLE?—*A PLAIN CALL TO ACTION!*

(The following article appeared in the November, 1943, issue of the Westchester Medical Bulletin. Because we believe the contents will be of interest to our readers we are republishing the entire article.)

The time has come . . . . for plain speech, for bold thinking and for decisive action. Bureaucratic control of medicine in starkest form, with all its obscene implications for the future of medical art and science, is an imminent probability.

Let it now be clearly emphasized that in opposing the injection of political control into the administration of medical service, doctors do not imply any complacent toleration of the *status quo*. The record on that is clear. No other profession or calling has more radically and continuously improved the content and methods of its service than medicine, during the past half century.

Yet, through its ostrich-like policy of inept public relations, the medical profession has permitted itself, during the past fifteen years, to be portrayed to the American people as a selfish vested interest, stubbornly opposing every suggestion or effort by social-minded people to improve the distribution or to reduce the costs of medical care.

Our failure clearly to interpret ourselves, our accomplishments, and our sincere purpose to the American people has rendered the art and science of American medicine exquisitely vulnerable to political manipulation by a bureaucracy seeking new ways of perpetuating its power. Furthermore, medicine's position of responsibility to the public places it at the mercy of political attack or envelopment.

What *can* be done, . . . what *must* be done, if we are to fulfill our fundamental obligation to the American people, and our responsibility to those who will follow us in our profession?

First, we *can*, even at this eleventh hour, *frankly and honestly tell our own story*, utilizing *in our own name* all the available means and media of modern public relations. If the American Medical Association must forfeit its tax-exempt status for the privilege of interpreting, not itself, but the medical profession to the American people (an assertion which we don't believe and hereby challenge)—then by all means let us buy our chips and get into the game! *Is it more important to the welfare of the American people for us to be exempt from taxes than from bureaucratic dictation?*

Second, we *can*, even at this eleventh hour, *establish an information and service bureau in Washington*, openly dedicated to the need of maintaining a continuous two-way channel of intercommunication between the medical profession and the people, the Federal agencies, and legislators who are interested in the services we render. The need for a Washington office for the American Medical Association is so obvious and urgent as to make any further delay in its establishment a matter of criminal negligence, in our opinion.

Third, we *can*, even at this eleventh hour, *assume our earned and rightful place of leadership* in the councils of those who seek to mould the future of our calling. We must certainly expect great and fundamental social changes: we will probably have to accept an increasing degree of proper governmental participation in medical service. But in any case, the profession must assert and maintain a definite status in the formulation of all legislation on health and medical matters. Merely to confer with governmental agencies cannot reasonably be construed as evidence that medicine has accepted their theories or philosophies concerning medical service. On the contrary, medicine owes it to the public, as it surely owes it to its own members, to assert its earned leadership in determining its own future.

The time is now!

ANOTHER PATRIOTIC RESPONSIBILITY

It has come to the attention of the JOURNAL that many physicians are being asked to sign certificates stating that students are unable to walk to the new bus routes established by the Office of Defense Transportation. As a conservation measure, bus routes have been materially reduced in mileage and pupils have been asked to walk to main highways. In some instances this has necessitated a walk of a mile and a half.

This places a further burden on the physician. Already he may be asked by patients to sign requests for additional fuel oil in homes where there are elderly persons or children requiring more heat. He may also be asked to sign requests for additional ration points for food items required by persons under his care. In both of the above instances, fairly satisfactory procedures have been adopted to protect both the physician and his patient.

No one will quarrel with the necessity for conserving both gasoline and tires. The Office of Defense Transportation has eliminated duplication of bus routes and shortened others. At the same time, it has made provisions whereby pupils who are unable to reach the new bus routes on foot

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TUBERCULOSIS IN WARTIME

By Iago Galdston, M.D.
Executive Secretary, Medical Information Bureau
New York Academy of Medicine

In time of war—beware of tuberculosis. Beware of tuberculosis at all times, but particularly so in wartimes. War and tuberculosis go together. And if we are to profit by past experiences, then we must redouble our guard.

In the last World War tuberculosis gained headway among all the peoples involved. The death rate, which up to 1914 had been steadily declining, began to rise shortly after hostilities broke out and continued to do so as the war years added up.

In this war it is not unlikely that tuberculosis will again make headway. Up to the present the tuberculosis record in the United States is in the main reassuring. But in England the early war years showed an increase of 10 per cent in deaths from tuberculosis. The figures for most of the other warring nations are either unavailable or unreliable.



But even in our own country, despite a continued decline in the general death rate from tuberculosis, there are some disturbing figures for the younger age groups. During the past year (1942) there was a noteworthy rise in tuberculosis deaths among young white men fifteen to twenty-four years of age, and among girls ten to fourteen years of age. These figures are a challenge which we must meet promptly and effectively.

One of the most important weapons in the war against tuberculosis is the x-ray. Every young person going to work for the first time should have a roentgenogram made of his or her lungs. Such a roentgenogram is of greatest value when it is part of a complete medical examination. Of equal importance are the day-in, day-out living habits, principally good and adequate food and sufficient rest.

Eating is not a matter of appeasing hunger. What we need are the right kinds of food, in sufficient quantities to supply us with energy and to keep us healthy. There is nothing "faddish" or "sissy" in knowing what foods we need and in eating them.

Adequate rest is of equal importance. Recreation and entertainment are also good, but not when purchased at the cost of sleep.

Then to be on "double guard," every one should know the signs and symptoms of tuberculosis: loss of weight, a "cold" that hangs on, a tiredness you cannot get rid of, fever, spitting blood. The presence of any one of these does not necessarily mean that the individual has tuberculosis, but each of these symptoms should be investigated.

In these days of intensive war effort, every man, woman and child counts. We need all the health and vitality we can muster. We cannot afford to gamble with or to waste any of our manpower. It is our individual responsibility to see that none of it is wasted. Learn how to best care for your own health and that of your family and how to protect yourself against the menace of tuberculosis.

Your local tuberculosis association is ready and eager to help you. You will find there literature, posters, information and advice. It is yours for the asking. Your support of the annual Christmas Seal Sale has made these services possible. Make them your weapons for health and victory.

Roster of Iowa Physicians in Military Service

As of November 26, 1943

Adair County

Cornell, D. D., Greenfield (APO 41, San Francisco, Cal.) ..... Capt., A.U.S.
Gantz, A. J., Greenfield (APO Los Angeles, Cal.) .. Capt., A.U.S.

Adams County

Willett, W. J., Carbon (Camp Maxey, Tex.) ..... Capt., A.U.S.

Allamakee County

Hogan, P. W., Waukon
Ivens, M. H., Waukon (Camp Shelby, La.)
Kiesau, M. F., Postville (Jefferson Barracks, Mo.) .. Major, A.U.S.
Rominger, C. R., Waukon (Camp Claiborne, La.) ..... A.U.S.

Appanoose County

Condon, F. J., Centerville (Owensboro, Ky.) .. Major, U.S.P.H.S.
Edwards, R. R., Centerville (Trenton, N. J.) ..... 1st Lt., A.U.S.
Huston, M. D., Centerville (Kansas City, Mo.) Capt., A.U.S.

Audubon County

Koehne, F. D., Audubon (Oroville, Wash.) ..... Major, A.U.S.

Benton County

Koontz, L. W., Vinton (APO 726, Seattle, Wash.) .. Capt., A.U.S.
Senfeld, Sidney, Belle Plaine

Black Hawk County

Bickley, D. W., Waterloo (Camp Howze, Texas) .... 1st Lt., A.U.S.
Bickley, J. W., Waterloo (Fort Sill. Okla.) ..... 1st Lt., A.U.S.
Butts, J. H., Waterloo (Galveston, Texas) ... Lt. Comdr., U.S.N.R.
Cooper, C. N., Waterloo (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Ellyson, C. D., Waterloo (Beaufort, S. C.) ..... Lt., U.S.N.R.
Ericsson, M. G., Cedar Falls (Camp Barkeley, Tex.) Capt., A.U.S.
Hartman, H. J., Waterloo (APO 33, San Francisco) Cal.) ..... Capt., A.U.S.
Henderson, L. J., Cedar Falls (Camp Roberts, Cal.) . Capt., A.U.S.
Hoyt, C. N., Cedar Falls (McClellan Field, Ala.) . 1st Lt., A.U.S.
Ludwick, A. L., Waterloo (APO 813, New York, N. Y.) ..... Capt., A.U.S.
Marquis, F. M., Waterloo (APO 180, Los Angeles, Cal.) ..... Capt., A.U.S.
O'Keefe, P. T., Waterloo (APO 79, Los Angeles, Cal.) ..... Capt., A.U.S.
Paige, R. T., LaPorte City (Des Moines, Ia.) . Lt. Comdr., U.S.N.R.
Rohlf, E. L., Jr., Waterloo (APO New York, N. Y.) ..... 1st Lt., A.U.S.
Seibert, C. W., Waterloo (Colorado Springs, Colo.) .. Capt. A.U.S.
Smith, E. E., Waterloo (APO 709, San Francisco, Cal.) ..... Major, A.U.S.
Smith, R. I., Waterloo (Milwaukee, Wis.) ..... Capt., A.U.S.
Smith, R. G., Cedar Falls (APO 512, New York, N. Y.) ..... Major, A.U.S.
Trunnell, T. L., Waterloo (care P.M., New York, N. Y.) ..... Lt., U.S.N.R.

Boone County

Brewster, E. S., Boone (Camp Chaffee, Ark.) .... Major, A.U.S.
Healy, M. J., Boone
Shane, R. S., Pilot Mound (Des Moines, Ia.) Lt. Col., A.U.S.

Bremer County

Amlie, P. J., Tripoli (Madison, Wis.)
Blum, O. S., Waverly (Fleet PO, New York, N. Y.) .. Lt., U.S.N.R.
Rathe, H. W., Waverly (Swannanoa, N. C.) ..... Capt., A.U.S.
Shaw, R. E., Waverly (Long Beach, Cal.) ..... 1st Lt., A.U.S

Buchanan County

Barton, J. C., Independence (St. Paul, Minn.) ... Lt. Col., A.U.S.
Hersey, N. L., Independence (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Leehey, P. J., Independence (APO 957, San Francisco, Cal.) ..... Capt., A.U.S.
Loeck, J. F., Aurora (Camp Rucker, Ala.) ..... Capt., A.U.S.

Buena Vista County

Almquist, R. E., Albert City (Camp Shelby, Miss.) . Capt., A.U.S.
Brecher, P. W., Storm Lake (Camp Adair, Ore.) .. Lt. Col., A.U.S.
Hansen, R. R., Storm Lake (Farragut, Idaho) ..... Lt., U.S.N.R.
Mailliard, R. E., Storm Lake (Camp Bowie, Tex.) . Lt. Col., A.U.S.
Shope, C. D., Storm Lake (Fort Des Moines, Ia.) .. Capt., A.U.S.
Witte, H. J., Marathon (Fort Crook, Nebr.) ..... Major, A.U.S

Butler County

Anderson, B. V., Greene (Fleet PO, Seattle, Wash.) Lt., U.S.N.R.
James, R. A., Allison (Mare Island, Cal.)
Rolfs, F. O., Parkersburg (Springfield, Mo.) ..... 1st Lt., A.U.S.

Calhoun County

Grinley, A. V., Rockwell City (APO 507, New York, N. Y.) ..... Capt., A.U.S.
Hobart, F. W., Lake City (Camp Grant, Ill.) .... Capt., A.U.S.
Peek, L. H., Lake City (Jefferson Barracks, Mo.) .. Capt., A.U.S.
Stevenson, W. W., Rockwell City (Port Hueneme Cal.) ..... Lt. Comdr., U.S.N.R.
Weyer, J. J., Lohrville (Camp Carson, Colo.) .... 1st Lt., A.U.S.

Carroll County

Anneberg, A. R., Carroll (Camp Barkeley, Texas)
Anneberg, W. A., Carroll
Cochran, J. L., Carroll (Gulfport, Miss.)
Cross, D. L., Coon Rapids (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Freedland, Maurice, Coon Rapids
Morrison, J. R., Carroll (Camp Maxey, Texas) ..... Capt., A.U.S.
Morrison, R. B., Carroll (APO 634, New York, N. Y.) Capt., A.U.S.
Pascoe, P. L., Carroll (Bowman Field, Ky.) ..... Capt., A.U.S.
Scannell, R. C., Carroll (APO, New York, N. Y.)
Tindall, R. N., Coon Rapids (APO 944, Seattle, Wash.) ..... Major, A.U.S
Wyatt, M. R., Manning (Charlotte, N. C.) ..... Capt. A.U.S.

Cass County

Egbert, D. S., Atlantic (Omaha, Nebr.) ..... Major, A.U.S.
Longstreth, C. M., Atlantic (Norman, Okla) . Lt. Comdr., U.S.N.R.
Needles, R. M., Atlantic (Davis, Cal.) ..... Capt., A.U.S.
Petersen, M. T., Atlantic (Topeka, Kan.) ..... Capt., A.U.S.

Cedar County

Laughlin, R. M., Tipton (San Diego, Cal.) ..... Lt., U.S.N.R.
Mosher, M. L., West Branch (Camp Gruber, Okla.) ..... Capt., A.U.S.
O'Neal, H. E., Tipton (Camp Polk, La.) ..... Lt. Col., A.U.S.

Cerro Gordo County

Adams, C. O., Mason City (Brigham City, Utah) ... Capt., A.U.S.
Egloff, W. C., Mason City (Mesa, Ariz.)
Flickinger, R. R., Mason City (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
Hale, A. E., Dougherty (Camp Hale, Colo.)
Harris. R. H., Mason City (Columbus, Ohio)
Harrison, G. E., Mason City (Boston, Mass.) ..... Col., A.U.S.
Houlahan, J. E., Mason City (Sacramento, Cal.) .. 1st Lt., A.U.S.
Lannon, J. W., Clear Lake (APO 758, New York, N. Y.) ..... Capt., A.U.S.
Long, D. L., Mason City (Santa Ana, Cal.)
Marinos, H. G., Mason City (APO 25, San Francisco, Cal.) ..... Capt., A.U.S.
Sternhill, Irving, Mason City (APO New York, N. Y.)

Cherokee County

Bullock, G. D., Washta (Camp Livingston, La.) .... Capt., A.U.S.
Ihle, C. W., Jr., Cleghorn (Camp San Luis Obispo, Cal.) ..... Major, A.U.S.
Noble, R. P., Cherokee (APO 634, New York, N. Y.) . Capt., A.U.S.
Swift, C. H., Jr., Marcus (Fort Bliss, Texas) .... Capt., A.U.S.

Chickasaw County

Caulfield, J. D., New Hampton (Denver, Colo.) .... Capt., A.U.S.
Murphey, A. L., Fredericksburg (APO 3470, San Francisco, Cal.) ..... Capt., A.U.S.
O'Connor, E. C., New Hampton (Camp Crowder, Mo.) ..... Capt., A.U.S.
Richmond, P. C., New Hampton (Camp Gruber, Okla.) ..... Capt. A.U.S.

Clay County

Adams, G. W., Royal (Fort Clayton, Panama Canal Zone)
Edington, F. D., Spencer (Lowry Field, Colo.) ..... Col., A.U.S.
Jones, C. C., Spencer (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
King, D. H., Spencer (Pendleton, Ore.) ..... Capt., A.U.S.

Clayton County

Anderson, H. M., Strawberry Point (Camp Crowder, Mo.) ..... 1st Lt., A.U.S.
Rhomberg, E. B., Guttenberg (Camp Wallace, Texas) . Capt., A.U.S.

Clinton County

Amesbury, H. A., Clinton (Portland, Ore.) ..... Capt., A.U.S.
Burke, J. C., Clinton (Great Bend, Kan.) ..... A.U.S.
Christensen, E. D., Grand Mound (Iowa City)
Ellison, G. M., Clinton (Shreveport, La.) ..... Capt., A.U.S.
Hill, D. E., Clinton
King, R. C., Clinton (Camp Chaffee, Ark.)
Lenaghan, R. T., Clinton (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Meyer, A. K., Clinton (Denver, Colo.)
Norment, J. E., Clinton (Mare Island, Cal.)
Riedesel, E. V., Wheatland (Fort Douglas, Utah)
Snyder, D. C., De Witt
Van Epps, E. F., Clinton (Palm Springs, Cal.) ..... Capt., A.U.S.
Waggoner, C. V., Clinton (San Bruno, Cal.) . Lt. Comdr., U.S.N.R.

Crawford County

Fee, C. H., Denison (Dunnellon, Fla.) ..... Capt., A.U.S.
Grau, A. H., Denison ..... Lt. Comdr., U.S.N.R.
Maire, E. J., Vail (San Francisco, Cal.)
Wetrich, M. F., Manilla (San Antonio, Tex.)

Dallas-Guthrie Counties

Byrnes, A. W., Guthrie Center (Fort Custer, Mich.) . Major, A.U.S.
Fail, C. S., Adel (Pacific Beach, Wash.) ..... Lt., U.S.N.R.
Margolin, J. M., Perry (Camp Cooke, Cal.) ..... Capt., A.U.S.

McGilvra, R. I., Guthrie Center (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Mullmann, A. J., Adel (Washington, D. C.) ..... Capt., A.U.S.
Nicoll, C. A., Panora (Camp Chaffee, Ark.) ..... Capt., A.U.S.
Osborn, C. R., Dexter (San Francisco, Cal.) ..... Lt., U.S.N.R.
Todd, D. W., Guthrie Center (APO 2, New York, N. Y.) ..... 1st Lt., A.U.S.
Wilke, F. A., Woodward (APO 627, New York, N. Y.) ..... 1st Lt., A.U.S.

Davis County

Fenton, C. D., Bloomfield (Carlisle Barracks, Pa.) .. Capt., A.U.S.
Gilfillan, G. W., Bloomfield (Oceanside, Cal) . Lt. Comdr., U.S.N.R.

Decatur County

Doss, W. N., Leon (APO 924, San Francisco, Cal.) .. Capt., A.U.S.
Gamet, E. E., Lamoni (APO New York, N. Y.) .... Capt., A.U.S.

Delaware County

Baumgarten, Oscar, Earlville (APO 3492, New York, N. Y.) A.U.S.
Clark, R. E., Manchester (APO 600, New York, N. Y.) ..... 1st Lt., A.U.S.

Des Moines County

Eigenfeld, M. L., Burlington (Camp Bowie, Texas) ..... 1st Lt., A.U.S.
Heitzman, P. O., Burlington (Fort Baker, Cal.) .... Capt., A.U.S.
Jenkins, G. D., Burlington (West Point, N. Y.) .... Lt. Col. A.U.S.
Lohmann, C. J., Burlington (Fort Lewis, Wash.) .. Major, A.U.S.
McKitterick, J. C., Burlington (Saunderstown, R. I.) ..... Lt. Comdr., U.S.N.R.
Moerke, R. F., Burlington (Abilene, Texas) ..... Capt., A.U.S.
Sage, E. C., Burlington ..... Lt. Comdr., U.S.N.R.

Dickinson County

Buchanan, J. J., Milford (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Henning, G. G., Milford (Camp Adair, Ore.) ..... Major, A.U.S.
Nicholson, C. G., Spirit Lake (Sawtelle, Cal.) ..... Capt., A.U.S.
Rodawig, D. F., Spirit Lake (Fort Hancock, N. J.) ..... Capt., A.U.S.

Dubuque County

Beddoes, M. G., Cascade (APO 932, San Francisco, Cal.) ..... Capt., A.U.S.
Conzett, D. C., Dubuque (Fort Riley, Kan.) ..... Lt. Col., A.U.S.
Cunningham, J. C., Dubuque (Fairfield, Ohio) ..... Capt., A.U.S.
Edstrom, Henry, Dubuque (Clinton, Iowa) ..... Major, A.U.S.
Entringer, A. J., Dubuque (APO 41, San Francisco, Cal.) ..... Capt., A.U.S.
Hall, C. B., Dubuque (Lubbock, Texas) ..... 1st Lt., A.U.S.
Knoll, A. H., Dubuque (San Francisco, Cal.) .... Major, A.U.S.
Langford, W. R., Epworth (APO 948, Seattle, Wash.) ..... Capt., A.U.S.
Lavery, H. B., Dubuque (Washington, D. C.) .... Lt. Col., A.U.S.
Leik, D. W., Dubuque (Wichita Falls, Tex.) .... 1st Lt., A.U.S.
Mueller, J. J., Dubuque (Hattiesburg, Miss.) .... 1st Lt., A.U.S.
Olson, P. F., Dubuque (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Painter, R. C., Dubuque (Fleet PO, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Paulus, J. W., Dubuque (APO San Francisco, Cal.) 1st Lt., A.U.S.
Plankers, A. G., Dubuque (APO 758, New York, N. Y.) ..... Major, A.U.S.
Quinn, E. P., Dubuque (Brentwood, L. I.) ..... Major, A.U.S.
Scharle, Theodore, Dubuque (APO Seattle, Wash.) Capt., A.U.S.
Schueller, C. J., Dubuque (APO 758, New York, N. Y.) ..... 1st Lt., A.U.S.
Sharpe, D. C., Dubuque (Fort Leonard Wood, Mo.) .. Major, A.U.S.
Smith, C. W., Dubuque (Fleet PO, San Francisco, Cal. ..... Lt., U.S.N.R.
Steffens, L. F.. Dubuque (Camp Chaffee. Ark.) .. Lt. Col.. A.U.S.
Straub, J. J., Dubuque (Corpus Christi, Texas) .... Lt., U.S.N.R.
Ward, D. F., Dubuque (Rochester, Minn.) ... Lt. Comdr., U.S.N.R.

Emmet County

Clark, J. P., Estherville (APO New York, N. Y.) .. Capt., A.U.S.
Collins, L. E., Estherville ..... A.U.S.
Miller, O. H., Estherville (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.

Fayette County

Camp, D. E., West Union (Camp Blanding, Fla.) ... Capt.. A.U.S.
Gallagher, J. P., Oelwein (Pensacola, Fla.) ..... Lt., U.S.N.R.
Henderson. W. B., Oelwein (St. Louis, Mo.) ..... Major, A.U.S.
Hess, A. M., West Union (Albuquerque, N. Mex.) .. 1st Lt., A.U.S.
Moen, H. P., West Union (Camp Barkeley, Texas) .. Capt., A.U.S
Sulzbach, J. F., Oelwein
Walsh, W. E., Hawkeye (Great Lakes, Ill.) .. Lt. Comdr., U.S.N.R.

Floyd County

Baltzell, W. C., Charles City (Camp McCoy, Wis.) .. Major, A.U.S.
Flater, N. C., Floyd (APO Los Angeles, Cal.) .... Capt., A.U.S.
Knight, R. A., Rockford (San Diego, Cal.) ..... Lt., U.S.N.R.
Mackie, D. G., Charles City (Topeka, Kan.) .... 1st Lt., A.U.S.
Miner, J. B., Jr., Charles City (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Tolliver, H. A., Charles City (San Pedro, Cal.) .... Capt., A.U.S.

Franklin County

Byers, W. L., Sheffield (Jefferson Barracks, Mo.) . 1st Lt., A.U.S.
Hedgecock, L. E., Hampton (care PM, San Francisco, Cal.) ..... Lt., U.S.N.R.
Randall, W. L., Hampton (Oceanside, Cal.) ..... Lt., U.S.N.R.
Walton, S. G., Hampton (Camp Robinson, Ark.) 1st Lt., A.U.S.

Fremont County

Kerr, W. H., Hamburg (Camp Phillips, Kan.) .... Capt., A.U.S.
Marrs, W. D., Tabor (APO 846, New York, N. Y.) ..... 1st Lt., A.U.S.
Wanamaker, A. R., Hamburg (Los Angeles. Cal.) .. Capt., A.U.S.

Greene County

Cartwright, F. P., Grand Junction (Boise, Idaho) ... Capt., A.U.S.
Castles, W. A., Jr., Rippey (APO San Francisco, Cal.) ..... Capt. A.U.S.
Hanson, L. C., Jefferson (Camp Rucker, Ala.) ... 1st Lt., A.U.S.
Jongewaard, A. J., Jefferson (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Limberg, J. I., Jr., Jefferson (APO San Francisco, Cal.) ..... Capt., A.U.S.
Lohr, P. E., Churdan (San Diego, Cal.) ..... A.U.S.

Grundy County

Rose, J. E., Grundy Center (Norman, Okla.) Lt. Comdr., U.S.N.R.

Hamilton County

Buxton, O. C., Webster City (Port Angeles, Wash.) 1st Lt., A.U.S.
Howar, B. F., Jewell (APO 514, New York, N. Y.) Major, A.U.S.
James, D. W., Kamrar (APO 700, New York, N. Y.) ..... Capt., A.U.S.
Lewis, W. B., Webster City (APO 763, New York, N. Y.) ..... Capt., A.U.S.
Mooney, F. P. Jewell (APO New York, N. Y.)
Paschal, G. A., Williams (Camp Barkeley, Texas) .. Capt., A.U.S.
Patterson, R. A., Webster City (San Diego, Cal.) ..... Lt. Comdr., U.S.N.R.
Ptacek, J. L., Webster City (Greenwood, S. Car.) ..... A.U.S.
Thompson, E. D., Webster City (Biloxi, Miss.) .. Capt., A.U.S.

Hancock-Winnebago Counties

Dolmage, G. H., Buffalo Center (Nashville, Tenn.) .. Capt., A.U.S.
Dulmes, A. H., Klemme (Camp Cooke, Cal.) ..... Capt., A.U.S.
Eller, L. W., Kanawha (APO 302, New York, N. Y.) ..... Capt., A.U.S.
Irish, T. J., Forest City (Farragut, Idaho) .. Lt. Comdr., U.S.N.R.
Shaw, D. F., Britt (Tucson, Ariz.) ..... A.U.S.
Thomas, C. W., Forest City (Camp Crowder, Mo.) .. Capt., A.U.S.

Hardin County

Burgess, A. W., Iowa Falls (Mare Island, Cal.) ..... Lt., U.S.N.R.
Houlihan, F. W., Ackley (APO 860, New York, N. Y.) ..... 1st Lt., A.U.S.
Jansonius, J. W., Eldora (APO 4834, New York, N. Y.) ..... Capt., A.U.S.
Johnson, R. J., Iowa Falls (Lawton, Okla.) ..... Capt., A.U.S.
Johnson, W. A., Alden (Pendleton, Ore.)
Shurts, J. J., Eldora (Camp Roberts, Cal.) ..... 1st Lt., A.U.S.
Steenrod, E. J., Iowa Falls (Long Beach, Cal.) ..... Lt., U.S.N.R.
Todd, V. S., Eldora (APO 545, Los Angeles, Cal.) ... Capt., A.U.S.

Harrison County

Bergstrom, A. C., Missouri Valley (Ft. Benning, Ga.) .... A.U.S.
Burbridge, G. E., Logan (Ft. Benning, Ga.) ..... Major, A.U.S.
Byrnes, C. W., Dunlap (Jefferson Barracks, Mo.)
Heise, C. A., Jr., Missouri Valley
Tamisiea, F. X., Missouri Valley (Jefferson Barracks, Mo.) ..... Capt., A.U.S.

Henry County

Brown, W. B., Mount Pleasant (APO 571, New York, N. Y.) ..... Major, A.U.S.
Cogan, Samuel, Mt. Pleasant ..... A.U.S.
Dwankowski, Carl, Mt. Pleasant (Carlisle Barracks, Pa.) ..... 1st Lt., A.U.S.
Gloeckler, B. B., Mount Pleasant (Fort McPherson, Ga.) ..... Capt., A.U.S.
Hartley, B. D., Mount Pleasant (Yuma, Ariz.) .... Capt., A.U.S.
Megorden, W. H., Mount Pleasant (Ogden, Utah) .. Capt., A.U.S.
Ristine, L. P., Mount Pleasant (Sioux Falls, S. Dak.) ..... Major, A.U.S.

Howard County

Buresh, Abner, Lime Springs (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Nierling, P. A., Cresco (APO 261, Los Angeles, Cal.) Capt., A.U.S.

Humboldt County

Arent, A. S., Humboldt (Stockton, Cal.) ..... Capt., A.U.S.
Coddington, J. H., Humboldt (Fresno, Cal.) ..... 1st Lt., A.U.S.

Ida County

Dressler, J. B., Ida Grove (APO 4713, San Francisco, Cal.) ..... Capt., A.U.S.
Harris, H. H., Battle Creek (Omaha, Neb.) .... 1st Lt., A.U.S.
Martin, J. W., Holstein (Montgomery, Ala.) ..... Capt., A.U.S.

Iowa County

McDaniel, J. D., Marengo (Fort Clark, Texas) ..... Capt., A.U.S.
Miller, D. F., Williamsburg (Seattle, Wash.) ..... Lt., U.S.N.R.

Jackson County

Swift, F. J., Jr., Maquoketa (Camp Atterbury, Ind.) Major, A.U.S.

Jasper County

Doake, Clarke, Newton ..... 1st Lt., A.U.S.
Minkel, R. M., Newton (APO New York, N. Y.) 1st Lt., A.U.S.
Ritchey, S. J., Newton ..... Major, A.U.S.

Jefferson County

Castell, J. W., Fairfield (Fort Devens, Mass.).....Capt., A.U.S.
Gittler, Ludwig, Fairfield (APO 1001, New York, N. Y.).....Major, A.U.S.
Graber H. E., Fairfield (Carlisle Barracks, Penn.) Major, A.U.S.
Taylor, I. C., Fairfield (Washington, D. C.)....1st Lt., A.U.S.

Johnson County

Agnew, J. W., Iowa City (Fort Meade, S. Dak.)....Capt., A.U.S.
Albert, S. M., Iowa City (Camp White, Ore.).....1st Lt., A.U.S.
Allen, J. H., Iowa City (Scott Field, Ill.).....Major, A.U.S.
Anderson, E. N., Iowa City (Clinton, Iowa).....Major, A.U.S.
Boiler, W. F., Iowa City (Fort Leonard Wood, Mo.).....Major, A.U.S.
Boyd, E. J., Iowa City (Tampa, Fla.).....Capt., A.U.S.
Brinkhous, K. M., Iowa City (APO 4672, San Francisco, Cal.).....Lt. Col., A.U.S.
Bunge, R. G., Iowa City (Biloxi, Miss.).....1st Lt., A.U.S.
Callahan, G. D., Iowa City (El Toro, Cal.).....Lt., U.S.N.R.
Cooper, W. K., Iowa City (Jefferson Barracks, Mo.) Capt., A.U.S.
Crowell, E. A., Iowa City (Randolph Field, Tex.)...Capt., A.U.S.
Diddle, A. W., Iowa City (Key West, Fla.).....Lt., U.S.N.R.
Dorner, R. A., Iowa City (APO 534, New York, N. Y.).....Capt., A.U.S.
Elmquist, H. S., Iowa City (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.
Emmons, H. S., Iowa City (Abilene, Texas).....Capt., A.U.S.
Flynn, J. E., Iowa City (Hot Springs, Ark.).....1st Lt., A.U.S.
Fourt, A. S., Iowa City (APO 34, New York, N. Y.).....Lt. Col., A.U.S.
Francis, N. L., Iowa City (Annapolis, Md.) Lt. (jg), U.S.N.R.
Galinsky, L. J., Oakdale (Camp Crowder, Mo.).....Capt., A.U.S.
Garlinghouse, R. O., Iowa City (APO 302, New York, N. Y.).....Major, A.U.S.
Hardin, R. C , Iowa City (APO 508, New York, N. Y.).....Capt., A.U.S.
Hartung, Walter, Iowa City (Camp Carson, Colo.)..Capt., A.U.S.
Hessin, A. L., Iowa City (Pepperell, Mass.).....1st Lt., A.U.S.
Irwin, R. L., Iowa City (Iowa City, Iowa)..Lt. Comdr., U.S.N.R.
January, L. E., Iowa City (Moses Lake, Wash.)....Capt., A.U.S.
Keislar, H. D., Iowa City (Washington, D. C.).....1st Lt., A.U.S.
Lage, R. H., Iowa City (Treasure Island, Cal.).....Lt., U.S.N.R.
Longwell, F. H., Iowa City (APO 505, New York, N. Y.).....Capt., A.U.S.
Morcland, F. B., Iowa City (Maxwell Field, Ala.)..1st Lt., A.U.S.
Nagyfy, S. F., Iowa City (Memphis, Tenn.)...Lt. (jg), U.S.N.R.
Newman. R. W., Iowa City (Fleet PO, New York, N. Y.).....Lt., U.S.N.R.
Parkin, G. L., Iowa City (Mountain Home, Idaho) .1st Lt., A.U.S.
Paulus, E. W., Iowa City (APO 1001, New York, N. Y.).....Lt. Col., A.U.S.
Petersen, V. W., Iowa City (APO 689, New York, N. Y.).....Col., A.U.S.
Sells. R. L., Jr., Iowa City (South San Francisco, Cal.).....Capt., A.U.S.
Smith, H. F., Iowa City (Great Lakes, Ill.).Lt. Comdr., U.S.N.R.
Springer, E. W., Iowa City (APO 622, Miami, Fla.).1st Lt., A.U.S.
Stadler, H. E., Iowa City (Washington, D. C.)....1st Lt., A.U.S.
Staggs, W. A., Iowa City (Camp Robinson, Ark.)..1st Lt., A.U.S.
Stephens. R. L., Iowa City (Orlando, Fla.).....Capt., A.U.S.
Stump, R. B., Iowa City (Fort Leonard Wood, Mo.).....Capt., A.U.S.
Titus, E. L., Iowa City (Fort Banks, Mass.).....Col., A.U.S.
Trepasso, T. J., Iowa City (Patterson Field, Ohio)..1st Lt., A.U.S.
Trussell, R. E., Iowa City (Philadelphia, Pa.).....1st Lt., A.U.S.
Vest. W. M., Iowa City (APO 928, San Francisco, Cal.).....Capt., A.U.S.
Ward, R. H., Iowa City (Iowa City, Iowa).....U.S.N.R.
Weatherly, H. E., Iowa City (APO 7278, San Francisco, Cal.).....1st Lt., A.U.S.
Ziffren, S. E., Iowa City (Springfield, Mo.).....1st Lt., A.U.S.

Junior Members

Adams, M. P., Iowa City.....Lt. (jg), U.S.N.R.
Ahrens, J. H., Iowa City (APO San Francisco, Cal.).....A.U.S.
Ball, A. L., Iowa City (Camp Polk, La.).....Major, A.U.S.
Barrent, M. E., Iowa City (Camp Tyson, Tenn.)..Capt., A.U.S.
Black, N. M., Iowa City (McChord Field, Wash.) 1st Lt., A.U.S.
Blair, J. D., Iowa City (APO San Francisco, Cal.).Major, A.U.S.
Boyd, R. J., Iowa City (Spokane, Wash.).....Capt., A.U.S.
Brintnall, E. S., Iowa City (Colorado Springs, Colo.).....1st Lt., A.U.S.
Burr, S. P., Iowa City (APO San Francisco, Cal.).1st Lt., A.U.S.
Connole J. F., Iowa City (Camp Bowie, Texas)..1st Lt., A.U.S.
Couch, O. A., Iowa City (Camp Van Dorn, Miss.)..1st Lt., A.U.S.
Decker, C. E., Iowa City (Oklahoma City, Okla.)..1st Lt., A.U.S.
Donnelly B. A., Iowa City (APO San Francisco, Cal.).....1st Lt., A.U.S.
Ehrenhaft, J. L., Iowa City (APO New York, N. Y.).....1st Lt., A.U.S.
Englerth, F. L., Iowa City (APO San Francisco, Cal.).....Capt., A.U.S.
Freiberg, M., Iowa City (Jefferson Barracks, Mo.).....A.U.S.
Glassman A. L., Iowa City (Palm Springs, Cal.) 1st Lt., A.U.S
Gilliland, C. H., Iowa City (Great Lakes, Ill.) Lt. (jg), U.S.N.R.
Hamilton, H. E., Iowa City (Chicago, Ill.).....1st Lt., A.U.S.
Harms, G. E., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Hendricks, A. B., Iowa City (Farragut, Idaho).....Lt., U.S.N.
Hovis, Wm., Iowa City (San Diego, Cal.).....Lt. (jg), U.S.N.R.
Ide, L. W., Iowa City (Fort Warren, Wyo.).....1st Lt., A.U.S.
Jacobs, C. A., Iowa City (APO New York, N. Y.).Major, A.U.S.
Kaplan, Nathan, Iowa City (Carlisle Barracks, Pa.).....1st Lt., A.U.S.
Keil, P. G., Iowa City (Sioux City, Iowa).....1st Lt., A.U.S.
Kelberg, M. R., Iowa City (Treasure Island, Cal.).....Lt. (jg), U.S.N.R.
Keleher, M. F., Iowa City (Great Lakes, Ill.)..Lt. (jg), U.S.N.R.
Keohen, G. F., Iowa City (Camp Grant, Ill.)....Capt., A.U.S.
Kugler, F. E., Iowa City (Fort Warren, Wyo.)....Capt., A.U.S.
Lowry, F. C., Iowa City (Sioux Falls, S. D.)....1st Lt., A.U.S.
McCann, J. P., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
McQuiston, W. O., Iowa City (APO San Francisco, Cal.).....Capt., A.U.S.
Moen, B. H., Iowa City
Moon, R. E., Iowa City (APO New York, N. Y.)...1st Lt., A.U.S.
Odell, Lester, Iowa City (Alameda, Cal.).....Lt. (jg), U.S.N.R.
Phillips, R. M., Iowa City (San Francisco, Cal.) 1st Lt., A.U.S.
Pulliam, R. L., Iowa City (Portland, Ore.).....Major, A.U.S.
Randall, C. G., Iowa City
Randall, R. G., Iowa City (Waterloo, Iowa).....Capt. A.U.S.
Rosenbusch, M., Iowa City (Fort Leonard Wood, Mo.).....1st Lt., A.U.S.
Russin, L. A., Iowa City (Fort Blanding, Fla.)....Capt., A.U.S.
Saar, J. L., Iowa City (APO New York, N. Y.)..Capt., A.U.S
Sawtelle, W. W., Iowa City.....Lt., U.S.N.R.
Schwidde, J. T., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Shand, J. A., Iowa City (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Shapiro, S. I., Iowa City
Simpson, F. E., Iowa City (Camp Grant, Ill.).....A.U.S
Skewis, J. E., Iowa City (Corona, Cal.).....Lt., U.S.N.R.
Skouge, O. T., Iowa City
Towle, R. A., Iowa City (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.
Warren, R. F., Iowa City (Santa Barbara, Cal.).....A.U.S.
Watters, V. G., Iowa City (Fort Leonard Wood, Mo.).....1st Lt., A.U.S.
Wicks, W. J., Iowa City (Camp Crowder, Mo.)....Capt., A.U.S.
Williams, L. A., Iowa City (Treasure Island, Cal.).1st Lt., A.U.S.
Willumsen, H. C., Iowa City (Chico, Cal.).....Capt., A.U.S.
Wolkin, J., Iowa City (San Antonio, Texas)....Capt., A.U.S.
Yetter, W. L., Iowa City (APO New York, N. Y.) Capt., A.U.S.
Zahrt, N. E., Iowa City (Miami Beach, Fla.)....1st Lt., A.U.S.
Zimmerman, H. A., Iowa City (Santa Ana, Cal.)..1st Lt., A.U.S.

Keokuk County

Bjork, Floyd, Keota (Austin, Texas).....A.U.S.
Doyle, J. L., Sigourney (Camp Barkeley, Texas).....A.U.S.
Engelmann, A. T., What Cheer (Camp Polk, La.) Capt., A.U.S.
Graham, J. A., Gibson (Needles, Cal.).....1st Lt., A.U.S.
Montgomery, G. E., Keota (Fort Sam Houston, Texas)....A.U.S.
Wiley, Dudley, Hedrick (Mason City, Wash.)

Kossuth County

Clapsaddle, D. W., Burt (Ft. Benning, Ga.).....1st Lt.. A.U.S.
Kenefick, J. N., Algona (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
Williams, R. L., Lakota (San Francisco, Cal.).....Lt. Comdr., U.S.N.R.

Lee County

Ashline, G. H., Keokuk (APO 253, New York, N. Y.) Capt., A.U.S.
Cleary, H. G., Fort Madison (APO 726, Seattle, Wash.).....Capt., A.U.S.
Cooper, R. E., Keokuk (Fort Leonard Wood, Mo.)
Johnstone, A. A., Keokuk (Camp Robinson, Ark.)....Col., A.U.S.
McKee, T. L., Keokuk (APO 922, San Francisco, Cal.).....Major, A.U.S.
Pumphrey, L. C., Keokuk (Ft. Leonard Wood, Mo.).....Major, A.U.S.
Rankin, J. R., Keokuk (Davenport, Iowa).....Lt., U.S.N.R.
Steffey, F. L., Keokuk (Fort Snelling, Minn.)
Van Werden, B. D., Keokuk (APO 4777, New York, N. Y.).....Capt., A.U.S.

Linn County

Andre, G. R., Lisbon (APO 90, Los Angeles, Cal.)...Major, A.U.S.
Berney, P. W., Cedar Rapids (San Francisco, Cal.) Capt., A.U.S.
Block, W. M., Cedar Rapids (APO 4759, San Francisco, Cal.).....1st Lt., A.U.S.
Chapman, R. M., Cedar Rapids (Chicago, Ill.).....Capt., A.U.S.
Coughlan, V. H., Coggon (Fort Snelling, Minn.).....A.U.S.
Courter, W. O., Springville (APO 464, New York, N. Y.).....Capt., A.U.S.
Crew, P. I., Marion (Monroe, La.).....Capt., A.U.S.
Dunn, F. C., Cedar Rapids (Pocatello, Idaho).....Capt., A.U.S.
Halpin, L. J., Cedar Rapids (Atlanta, Ga.)....Major, A.U.S.
Hecker J. T., Cedar Rapids (Pecos, Texas).....1st Lt., A.U.S.
Jirsa, H. O., Cedar Rapids (APO 871, New York, N. Y.).....Major, A.U.S.
Keith, J. J., Marion (APO 502, San Francisco, Cal.).....Major, A.U.S.
Kieck, E. G., Cedar Rapids (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R
Kruckenberg, W. G., Mount Vernon (Rochester Minn.).....Lt., U.S.N.R.
Locher, R. C., Cedar Rapids (Merced, Cal.).....Major, A.U.S.
MacDougal, R. F., Cedar Rapids (Carlisle Barracks, Pa.).....Capt., A.U.S.
McConkie, E. B., Cedar Rapids (Sioux Falls, S. Dak.).....Major, A.U.S.
McQuiston, J. S., Cedar Rapids (Salina, Kan.)..Major, A.U.S.
Meffert, C. B., Cedar Rapids (Camp Carson, Colo.)..Major, A.U.S.
Netolicky, R. Y., Cedar Rapids (San Francisco, Cal.).Lt., U.S.N.R.
Noble, W. C., Cedar Rapids (Camp San Luis Obispo, Cal.).....1st Lt., A.U.S.
Noe, C. A., Cedar Rapids (Hot Springs, Ark.)..Major, A.U.S.

Parke, John, Cedar Rapids (APO 34, New York, N. Y.) ..... Capt., A.U.S.
Proctor, R. D., Cedar Rapids (Corpus Christi, Texas) ..... Lt. Comdr., U.S.N.R.
Redmond, J. J., Cedar Rapids (APO 813, New York, N. Y.) ..... Major, A.U.S.
Rieniets, J. H., Cedar Rapids (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr, U.S.N.R.
Sedlacek, L. B., Cedar Rapids (Camp Shelby, Miss.) ..... Lt. Col., A.U.S.
Smrha, J. A., Cedar Rapids (APO 4665, San Francisco, Cal.) ..... Capt., A.U.S.
Stark, C. H., Cedar Rapids (Denver, Colo.) ..... Capt., A.U.S.
Sulek, A. E., Cedar Rapids (APO, 957, San Francisco, Cal.) ..... Major, A.U.S
Woodhouse, K. W., Cedar Rapids (APO 34, New York, N. Y.) ..... Lt. Col., A.U.S.
Wray, R. M., Cedar Rapids (APO 958, San Francisco, Cal.) ..... Major, A.U.S
Yavorsky, W. D., Cedar Rapids (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.

Louisa County

DeYarman, K. T., Morning Sun (San Antonio, Texas) ..... Capt., A.U.S.
Tandy, R. W., Morning Sun (Norfolk, Va.) .. Lt. Comdr., U.S.N.R.

Lucas County

Lister, K. E., Chariton (Fort Snelling, Minn.) ..... A.U.S.

Lyon County

Cook, S. H., Rock Rapids (Memphis, Tenn.) ..... Capt., A.U.S
‡Corcoran, T. E., Rock Rapids (APO New York) N. Y.) ..... Capt. A.U.S
Moriarty, J. F., Rock Rapids (APO 700, New York, N. Y.) ..... Capt. A.U.S.

Madison County

Boden, H. N., Truro (Fresno, Cal.)
Chesnut, P. F., Winterset (Portland, Ore.) ..... 1st Lt., A.U.S
Wicks, R. L., Winterset (APO, New York, N. Y.) . Lt. Col., A.U.S.
Veltman, J. F., Winterset (APO 957, San Francisco, Cal.) ..... Capt., A.U.S.

Mahaska County

Bennett, G. W., Oskaloosa (Fort Riley, Kan.) .. Major, A.U.S.
Bos, H. C., Oskaloosa ..... Major, A.U.S.
Campbell, W. V., Oskaloosa (San Diego, Cal.) ..... Lt. Comdr., U.S.N.R.
Clark, G. H., Oskaloosa (Norman, Okla.) .. Lt. Comdr., U.S.N.R.
Greenlee, M. R., Oskaloosa (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Lemon, K.M., Oskaloosa ..... 1st Lt., A.U.S.
Zager, L. L., Oskaloosa (APO 81, Los Angeles, Cal.) ..... 1st Lt., A.U.S.

Marion County

Elliott, V. J., Knoxville (Portland, Ore.) ..... Capt., A.U.S.
Mater, D. A., Knoxville (Lincoln, Neb.) ..... Major, A.U.S.
Ralston, F. P., Knoxville (Indio, Cal.) ..... Capt., A.U.S.
Schiek, C. M., Knoxville ..... Lt. Comdr., U.S.N.R
Schroeder, M. C., Pella (Bastrop, Texas) ..... 1st Lt., A.U.S.
Williams, D. B., Knoxville ..... Capt. A.U.S.

Marshall County

Carpenter, R. C., Marshalltown (APO New York, N. Y.) ..... Capt., A.U.S.
Marble, E. J., Marshalltown (San Diego, Cal.) .... Lt., U.S.N.R
Marble, W. P., Marshalltown (Walla Walla, Wash.) Major, A.U.S.
Meyer, M. G., Marshalltown (Fort Ethan Allen, Vt.) Major, A.U.S.
Noonan, J. J., Marshalltown (San Diego, Cal.) .. Major, A.U.S.
Phelps, R. E., State Center (APO 730, Seattle, Wash.) Capt., A.U.S.
Sinning, J. E., Melbourne (Camp Haan, Cal.) ..... Capt., A.U.S.
Smith, E. M., State Center (Gowen Field, Idaho) .. Lt. Col., A.U.S.
Stegman, J. J., Marshalltown (Portland, Ore.) .. Capt., A.U.S.
Wells, R. C., Marshalltown (Gowen Field, Idaho) 1st Lt., A.U.S.
Wolfe, O. D., Marshalltown (Fort Riley, Kan.) .. Capt., A.U.S.
Wolfe, R. M., Marshalltown (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.

Mills County

DeYoung, W. A., Glenwood (APO 813, New York, N. Y.) ..... Capt., A.U.S.
Magaret, E. C., Glenwood (Lubbock, Texas) .... 1st Lt., A.U.S
Shonka, T. E., Malvern (APO 4913, New York, N. Y.) ..... Capt., A.U.S.

Mitchell County

Culbertson, R. A., St. Ansgar (Fort Knox, Ky.) ... Lt. Col., A.U.S.
Moore, E. E., Osage (Camp Mackall, N. C.) ..... Major, A.U.S.
Owen, William, Osage (San Diego, Cal.) ..... Lt. (jg), U.S.N.R.
Walker, T. G., Riceville (Minneapolis, Minn.) ..... Lt., U.S.N.R.

Monona County

Almer, L. E., Moorhead (Fort Knox, Ky.) ..... A.U.S.
Anderson, S. N., Onawa (San Francisco, Cal.) ..... Lt., U.S.N.R.
Ganzhorn, H. L., Mapleton (APO 4759, San Francisco, Cal.) ..... 1st Lt., A.U.S.
Gaukel, L. A., Onawa (APO 937, Seattle, Wash.) .. 1st Lt., A.U.S.
†Harlan, M. E., Onawa (care PM, San Francisco, Cal.) ..... Lt. (jg), U.S.N.R.
Stauch, M. O., Whiting (Fort Rosecrans, Cal.) ..... A.U.S.
Wainwright, M. T., Mapleton (APO 939, Seattle, Wash.) .. A.U.S.
Wolpert, P. L., Onawa (Rochester, Minn.) ..... 1st Lt., A.U.S.

Monroe County

Heimann, V. R., Albia (Camp Maxey, Texas) ..... Capt., A.U.S.
Richter, H. J., Albia (Waco, Texas) ..... Capt., A.U.S.
Smith, R. A., Albia (San Antonio, Texas) ..... 1st Lt., A.U.S.

Montgomery County

Bastron, H. C., Red Oak (Macon, Ga.) ..... Major, A.U.S.
Hansen, F. A., Red Oak (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Moriarty, L. R., Villisca (APO 944, Seattle, Wash.) . Capt., A.U.S.
Nelson, C. C., Red Oak (San Diego, Cal.) ..... Lt., U.S.N.R.
Panzer, E. J. C., Stanton (San Diego, Cal.) .... Lt. (jg), U.S.N.R.
Sorensen, E. M., Red Oak (Jefferson Barracks, Mo.) ..... 1st Lt., A.U.S

Muscatine County

Ady, A. E., West Liberty (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Asthalter, R. W., Muscatine (Fort Meade, Md.) .. 1st Lt., A.U.S.
Carlson, E. H., Muscatine (Kalamazoo, Mich.) .... Capt., A.U.S.
Goad, R. R., Muscatine (Washington, D. C.) Lt. Comdr., U.S.N.R.
Kimball, J. E., Jr., West Liberty (APO Miami, Fla.)
Lindley, E. L., Muscatine (APO Los Angeles, Cal.) . Capt., A.U.S.
Muhs, E. O., Muscatine (Camp Claiborne, La.) .... Major, A.U.S.
Norem, Walter, Muscatine (APO Miami, Fla.) .... Capt., A.U.S.
Robertson, T. A., West Liberty (APO 4735, New York, N. Y.) ..... Capt., A.U.S.
Sywassink, G. A., Muscatine (Camp Campbell, Ky.) Major, A.U.S.
Whitmer, L. H., Wilton Junction (Fort Sill, Okla.) . Major, A.U.S.

O'Brien County

Getty, E. B., Primghar (Shreveport, La.) ..... Capt., A.U.S.
Hayne, W. W., Paullina (APO New York, N. Y.) .. 1st Lt., A.U.S.
Moen, S. T., Hartley (APO 3492, New York, N. Y.) . Major, A.U.S.
Myers, K. W., Sheldon (Watertown, S. Dak.) .. 1st Lt., A.U.S.

Osceola County

Kuntz, G. S., Sibley (APO 34, New York, N. Y.) .... Capt., A.U.S.

Page County

Barnes, C. A., Shenandoah (Fort Bragg, N. C.) .... Capt., A.U.S.
Blackman, Nathan, Clarinda (Ft. Leavenworth, Kan.) ..... Capt., A.U.S.
Bossingham, E. N., Clarinda (APO 923, San Francisco, Cal.) ..... Capt., A.U.S.
Bunch, H. Mck., Shenandoah (Farragut, Idaho) ..... Lt. Comdr., U.S.N.R.
‡Burdick, F. D., Shenandoah (APO, New York, N. Y.) ..... Capt., A.U.S.
Burnett, F. K., Clarinda (APO 4713, San Francisco, Cal.) ..... Major, A.U.S.
Little, E. B., Shenandoah ..... 1st Lt., A.U.S.
Rausch, G. R., Clarinda (Wendover Field, Utah) 1st Lt., A.U.S.
Savage, L. W., Shenandoah (Fort Meade, Md.) .. 1st Lt., A.U.S.

Palo Alto County

Davey, W. P., Emmetsburg (San Diego, Cal.) Lt. (jg), U.S.N.R.

Plymouth County

Bowers, C. V., LeMars (APO New York, N. Y.) .. 1st. Lt., A.U.S.
Fisch, R. J., LeMars (Carlisle Barracks, Pa.) .... 1st Lt., A.U.S.
Foss, R. H., Remsen (Salt Lake City, Utah) .. 1st Lt., A.U.S.
Wolfson, Harold, Kingsley (Fort Lewis, Wash.) .... Capt., A.U.S.

Pocahontas County

Blair, F. L., Jr., Fonda ..... 1st Lt., A.U.S.
Herrick, T. G., Gilmore City (Los Angeles, Cal.) ... Capt., A.U.S.
Larson, J. B., Laurens (APO 7233, San Francisco, Cal.) ..... Capt., A.U.S.
Leserman, L. K., Rolfe (APO 502, San Francisco, Cal.) ..... Capt., A.U.S.

Polk County

Abbott, W. D., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt. Comdr., U.S.N.R.
Anderson, N. B., Des Moines (APO 521, New York, N. Y.) ..... Lt. Col., A.U.S.
Angell, C. A., Des Moines (Camp Maxey, Texas) .... Capt., A.U.S.
Anspach, R. S., Mitchellville (APO 528, New York, N. Y.) ..... Lt. Col., A.U.S.
Barner, J. L., Des Moines (Atlanta, Ga.) .... Major, A.U.S.
Barnes, B. C., Des Moines (Ogden, Utah) ..... Capt., A.U.S.
Bates, M. T., Des Moines (Fleet PO, New York, N Y.) ..... Lt. Comdr., U.S.N.R.
Bender, H. R., Des Moines (Carlisle Barracks, Penn) ..... 1st Lt., A.U.S.
Bond, T. A., Des Moines (Shoemaker, Cal.) ..... Lt., U.S.N.R.
Bone, H. C., Des Moines (Arlington, Cal.) ..... Capt., A.U.S.
Brown, A. W., Des Moines (APO 182, Los Angeles, Cal.) ..... Capt., A.U.S.
Bruner, J. M., Des Moines (Fort Bliss, Texas) .... Major, A.U.S.
Bruns, P. D., Des Moines (Carlisle Barracks, Penn.) ..... 1st Lt., A.U.S.
‡Burgeson, F. M., Des Moines (Gefangenennummer 1480, Lager-Bezeichnung: Kriegsgef-Offizierlager XXI B, Deutschland [Allemagne]) ..... Capt., A.U.S.
Caldwell, J. W., Des Moines (Vulcan, Alberta, Canada) ..... Flight Lt., R.C.A.F.
Chambers, J. W., Des Moines (Concordia, Kan.) .... 1st Lt., A.U.S.
Chase, W. B., Jr., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Clark, G. E., Jr., Des Moines (Randolph Field, Texas) ..... 1st Lt., A.U.S.
Connell, J. R., Des Moines (APO New York, N. Y.) Capt., A.U.S.

Corn, H. H., Des Moines (St. Louis, Mo.).....1st Lt., A.U.S.
Coughlan, D. W., Des Moines (APO New York, N. Y.).....Capt., A.U.S.
Crowley, D. F., Jr., Des Moines (Presque Isle, Me.)..Capt., A.U.S.
Crowley, F. A., Des Moines (APO 783, New York, N. Y.).....1st Lt., A.U.S.
DeCicco, Ralph, Des Moines (APO Los Angeles, Cal.).....Capt., A.U.S.
Decker, H. G., Des Moines (Long Beach, Cal.).....Lt. Comdr., U.S.N.R.
Downing, A. H., Des Moines (Fort Snelling, Minn.).1st Lt., A.U.S.
Dushkin, M. A., Des Moines (APO 628, New York, N. Y.).....Major, A.U.S.
Elliott, O. A., Des Moines (Pecos, Texas).....Capt., A.U.S.
Ellis, H. G., Des Moines (Kearney, Nebr.).....Capt., A.U.S.
Ervin, L. J., Des Moines (Lubbock, Texas).....Major, A.U.S.
Fried, David, Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Fracasse, John, Des Moines.....1st Lt., A.U.S.
George, E. M., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R
Gerchek, E. W., Des Moines
Gibson, D. N., Des Moines (Utica, N. Y.).....Major, A.U.S.
Glomset, D. A., Des Moines (New Orleans, La.)....1st Lt., A.U.S.
Goldberg, Louie, Des Moines (Gulfport, Miss.).....1st Lt., A.U.S.
Gordon, A. M., Des Moines (APO 763, New York N. Y.).....Capt., A.U.S.
Graeber, F. O., Des Moines (Fleet PO, San Francisco, Cal.) ..... Lt., U.S.N.R.
Greek, L. M., Des Moines (Camp Crowder, Mo.)..1st Lt., A.U.S.
Gurau, H. H., Des Moines (Santa Ana, Cal.).....1st Lt., A.U.S.
Haines, D. J., Des Moines (APO 913, San Francisco, Cal.).....Capt., A.U.S.
Harris, D. D., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Harris, H. L., Des Moines (Salina, Kan.).....1st Lt., A.U.S.
Hess, John, Jr., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
James, A. D., Des Moines (Fleet PO, San Francisco, Cal.).....Comdr., U.S.N.R.
Johnston, C. H., Des Moines (APO 639, New York, N. Y.).....Lt. Col., A.U.S.
Kast, D. H., Des Moines (Fort Stevens, Ore.).....Capt., A.U.S.
Kelley, E. J., Des Moines (Marshall, Mo.)....Lt. Comdr., U.S.N.R.
Kelly, D. H., Des Moines (Denver, Colo.).....Lt. Col., A.U.S.
Klocksiem, H. L., Des Moines.....Lt. (jg), U.S.N.R.
Kottke, E. E., Des Moines (Temple, Texas).....Capt., A.U.S.
Landis, S. N., Des Moines (West Palm Beach, Fla.).....1st Lt., A.U.S.
La Tona, Salvatore, Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Lederman, James, Des Moines.....1st Lt., R.C.A.
Lehman, E. W., Des Moines (Memphis, Tenn.)....Major, A.U.S.
Losh, C. W., Jr., Des Moines (Jackson, Miss.).....1st Lt., A.U.S.
Lovejoy, E. P., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.
Maloney, P. J., Des Moines (Fort Lewis, Wash.)...1st Lt., A.U.S.
Marquis, G. S., Des Moines (Chicago, Ill.)..Lt. Comdr., U.S.N.R.
Martin, L. E., Des Moines (Helena, Ark.).....1st Lt., A.U.S.
Mauritz, E. L., Des Moines (APO 763, New York, N. Y.).....Capt., A.U.S.
McCoy, H. J., Des Moines (Iowa City, Iowa)...Comdr., U.S.N.R.
McDonald, D. J., Des Moines (March Field, Cal.).Capt., A.U.S.
McNamee, J. H., Des Moines (Oakland, Cal.).....Lt. Comdr., U.S.N.R.
Mencher, E. W., Des Moines.....1st Lt., A.U.S.
Merkel, B. M., Des Moines (APO 520, New York, N. Y.).....Major, A.U.S.
Montgomery, S. A., Des Moines (Carlisle Barracks, Pa.).....Capt., A.U.S.
Morden, R. P., Des Moines (APO 4570, New York, N. Y.).....1st Lt., A.U.S.
Murphy, J. H., Des Moines (Barstowe, Cal.).....Lt., U.S.N.R.
Nelson, A. L., Des Moines (Camp Livingston, La.) Capt., A.U.S.
Noun, L. J., Des Moines (Fleet PO, New York, N. Y.).....Lt. (jg), U.S.N.R.
Noun, M. H., Des Moines (APO 871, New York, N. Y.).....Major, A.U.S.
Nourse, M. H., Des Moines (Bethesda, Md.)..Lt. (jg), U.S.N.R.
Patton, B. W., Des Moines (Camp Robinson, Ark.).....1st Lt., A.U.S.
Pearlman, L. R., Des Moines (APO 980, Seattle, Wash.).....Major, A.U.S.
Peisen, C. J., Des Moines (Camp Perry, Ohio)..1st Lt., A.U.S.
Penn, E. C., West Des Moines (Spokane, Wash.).....1st Lt., A.U.S.
Pfeiffer, E. P., Des Moines (Springfield, Mo.)....Capt., A.U.S.
Phillips, A. B., Des Moines (Corpus Christi, Texas).....Lt., U.S.N.R.
Porter, R. J., Des Moines (Kearney, Nebr.).....Capt., A.U.S.
Powell, L. D., Des Moines (Long Beach, Cal.)....Capt., U.S.N.R.
Pratt, E. B., Des Moines (APO New York, N. Y.) Capt., A.U.S.
Priestley, J. B., Des Moines (Camp Phillips, Kan.)..Major, A.U.S.
Purdy, W. O., Des Moines (Camp Howze, Texas)..Capt., A.U.S.
Riegelman, R. H., Des Moines (APO 634, New York, N. Y.).....Major, A.U.S.
Robinson, V. C., Des Moines (Tampa, Fla.)....Capt., A.U.S.
Rotkow, M. J., Des Moines (Louisville, Ky.)....1st Lt., A.U.S.
Schaeferle, M. J., Des Moines (Carlisle Barracks, Penn.).....1st Lt., A.U.S.
Schlaser, V. L., Des Moines (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.
Shepherd, L. K., Des Moines (APO New York, N. Y.).....Capt., A.U.S.
Shifler, H. K., Des Moines (APO New York, N. Y.).Capt., A.U.S.
Singer, P. L., Des Moines (Camp Grant, Ill.)..1st Lt., A.U.S.
Skultety, J. A., Des Moines (Brownsville, Texas).....1st Lt., U.S.P.H.S.
Smead, H. H., Des Moines (Dover, Del.).....Capt., A.U.S.
Smith, H. J., Des Moines (Fleet PO, San Francisco, Cal.).....Lt., U.S.N.R.
Smith, R. T., Des Moines (Oklahoma City, Okla.)..1st Lt., A.U.S.
Snodgrass, R. W., Des Moines (Fort Rosecrans, Cal.).....Capt., A.U.S.
Snyder, G. E., Grimes (Sheppard Field, Tex.).....Major, A.U.S.
Sohm, H. A., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.
Sorensen, R. M., Des Moines (Topeka, Kan.).Major, U.S.P.H.S.
Springer, F. A., Des Moines (Treasure Island, Cal.).....Lt. Comdr., U.S.N.R.
Stearns, A. B., Des Moines (Denver, Colo.)..Major, A.U.S.
Stickler, Robert, Des Moines (Fort Benning, Ga.)..Capt., A.U.S.
Stitt, P. L., Des Moines (Seattle, Wash.)....Lt. (jg), U.S.N.R.
Throckmorton, J. F., Des Moines (Camp Howze, Texas).....Capt. A.U.S.
Toubes, A. A., Des Moines (APO 12453, New York, N. Y.).....Capt., A.U.S.
Turner, H. V., Des Moines (Camp Fannin, Texas)..Capt., A.U.S.
Updegraff, Thomas, Des Moines (Spokane, Wash.).1st Lt., A.U.S.
Van Hale, L. A., Des Moines (Transfer, Penn.)....1st Lt., A.U.S.
Vaubel, E. K., Des Moines (Silver Spring, Md.).....Capt., A.U.S.
Wagner, E. C., Des Moines (Washington, D. C.)..1st Lt., A.U.S.
Willett, W. M., Des Moines (Fort Bragg, N. C.)....Capt., A.U.S.
Wirtz, D. C., Des Moines (Fleet PO, San Francisco, Cal.).....Lt. Comdr., U.S.N.R.
Zarchy, A. C., Des Moines (Camp Cook, Cal.).....Capt., A.U.S.

Pottawattamie County

‡Beaumont, F. H., Council Bluffs (APO 34, New York, N. Y.).....Major, A.U.S.
Cogley, J. P., Council Bluffs (APO 4672, San Francisco, Cal.) .....Major, A.U.S.
Collins, R. M., Council Bluffs (San Diego, Cal.)....Lt., U.S.N.R.
Dean, A. M., Council Bluffs (Pensacola, Fla.).....Lt. Comdr., U.S.N.R.
Edwards, C. V., Council Bluffs (Olathe, Kan.) .....Lt. Comdr., U.S.N.R.
Hennessy, J. D., Council Bluffs (Chicago, Ill.)..Lt., U.S.N.R.
Jensen, A. L., Council Bluffs (APO 952, San Francisco, Cal.).....Lt. Col., A.U.S.
Klok, G. J., Council Bluffs (Fleet PO, San Diego, Cal.).....Lt., U.S.N.R.
Kurth, C. J., Council Bluffs (Camp Crowder, Mo.)..Capt., A.U.S.
Limbert, E. M., Council Bluffs (Camp Crowder, Mo.).....Capt., A.U.S.
Maiden, S. D., Council Bluffs (Longview, Tex.).....Major, A.U.S.
Martin, L. R., Council Bluffs (APO 7278, San Francisco, Cal.).....Capt., A.U.S.
Moskovitz, J. M., Council Bluffs (Camp Lockett Cal.).....Capt., A.U.S.
Sternhill, Isaac, Council Bluffs (APO 938, Seattle, Wash.).....Capt., A.U.S.
Tinley, R. E., Council Bluffs (APO 34, New York, N. Y.).....Capt., A.U.S.
Treynor, J. V., Council Bluffs (Rochester, Minn.).....Lt. Comdr., U.S.N.R.
West, A. G., Council Bluffs (Carlisle Barracks, Pa.).....1st Lt., A.U.S.
Wieseler, R. J., Avoca (McChord Field, Wash.).....A.U.S.
Wurl, O. A., Council Bluffs (APO 871, New York, N. Y.).....Capt., A.U.S.

Poweshiek County

Brobyn, T. E., Grinnell (APO 726, Seattle, Wash.) Major, A.U.S.
Hickerson, L. C., Brooklyn (San Francisco, Cal.)..1st Lt., A.U.S.
Korfmacher, E. S., Grinnell (San Francisco, Cal.).....Capt., A.U.S.
Niemann, T. V., Brooklyn (APO San Francisco, Cal.).....Capt., A.U.S.
Parish, J. R., Grinnell (Treasure Island, Cal.).....Lt. Comdr., U.S.N.R.

Ringgold County

Seaman, C. L., Mount Ayr (Van Buren, Ark.)..Capt., A.U.S.

Sac County

Bassett, G. H., Sac City (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
Deters, D. C., Schaller (APO 1001, New York, N. Y.).....Capt., A.U.S
Evans, W. I., Sac City (Camp Hood, Texas).....Capt., A.U.S.
Klocksiem, R. G., Odebolt (Fleet PO, San Francisco, Cal.).....Lt. (jg), U.S.N.R.
Neu, H. N., Sac City (APO 4936, San Francisco, Cal.).....Major, A.U.S.

Scott County

Baker, R. W., Davenport (Rock Island, Ill.).....Capt., A.U.S.
Balzer, W. J., Davenport (APO 939, Seattle, Wash.) Capt., A.U.S.
Bishop, J. F., Davenport (APO 972, Seattle, Wash.).....Capt., A.U.S.
Block, L. A., Davenport (APO 534, New York, N. Y.).....Major, A.U.S.
Boden, W. C., Davenport (APO 3760, New York, N. Y.).....Capt., A.U.S.
Boyer, U. S., Davenport (Rock Island, Ill.).....Lt. Col., A.U.S.
Brown, D. H., Davenport (Waycross, Ga.).....Capt., A.U.S.
Brown, M. J., Davenport (Camp Hale, Colo.)....Major, A.U.S.
Carey, E. T., Davenport (Fort Andrews, Mass.)..1st Lt., A.U.S.

Christiansen, C. C., Dixon (APO 961, San Francisco, Cal.) .....Capt., A.U.S.
Coleman, Tom, Davenport (Camp Stewart, Ga.)...1st Lt., A.U.S.
Cummins, G. M., Jr., Davenport.....1st Lt., A.U.S.
Decker, C. E., Davenport (Oklahoma City, Okla.) .....1st Lt., A.U.S.
Evans, H. J., Davenport (St. Petersburg, Fla.).....Capt., A.U.S.
Gibson, P. E., Davenport (Palm Springs, Cal.).....Capt., A.U.S.
Goenne, Wm., Jr., Davenport (Camp White, Ore.)..1st Lt., A.U.S.
Hurevitz, H. M., Davenport (APO 3658, New York, N. Y.) .....Capt., A.U.S.
Hurteau, Everett, Davenport (APO 647, New York, N. Y.) .....1st Lt., A.U.S.
Hurteau, W. W., Davenport (Camp Barkeley, Texas) .....Major, A.U.S.
Kimberly, L. W., Davenport (New Orleans, La.).Capt., A.U.S.
Krakauer, Max, Davenport (Battle Creek, Mich.)..1st Lt., A.U.S.
LaDage, L. H., Davenport (APO 183, Los Angeles, Cal.) .....Major, A.U.S.
Lorfeld, G. W., Davenport (Waynesburg, Pa.).....Capt., A.U.S.
Marker, J. I., Davenport (Camp Carson, Colo.)..Col., A.U.S.
McMeans, T. W., Davenport (APO 514, New York, N. Y.) .....1st Lt., A.U.S.
Neufeld, R. J., Davenport (Camp Ellis, Ill.).....Capt., A.U.S.
Sheeler, I. H., Davenport (Carlisle Barracks, Pa.)..Capt., A.U.S.
Shorey, J. R., Davenport (Carlisle Barracks, Pa.).Capt., A.U.S.
Smazal, S. F., Davenport (APO 514, New York, N. Y.) .....1st Lt., A.U.S.
Sorenson, A. C., Davenport (Oakland, Cal.)..Lt. Comdr., U.S.N.R.
Sunderbruch, J. H., Davenport (Paris, Texas).....Capt., A.U.S.
Weinberg, H. B., Davenport (Fort Benning, Ga.)..Major, A.U.S.
Zukerman, C. M., Bettendorf (Cincinnati, Ohio)....Capt., A.U.S.

Shelby County

Bisgard, C. V., Harlan (Farragut, Idaho)..Lt. Comdr., U.S.N.R.
Griffith, W. O., Shelby (Camp Davis, N. C.).....A.U.S.
McGowan, J. P., Harlan (San Diego, Cal.)..Lt. Comdr., U.S.N.R.

Sioux County

Gleysteen, R. R., Alton (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.
Grossmann, E. B., Orange City (Fort Sam Houston, Texas) .....1st Lt., A.U.S.
Larson, M. O., Hawarden (Camp Bowie, Texas)....Major, A.U.S.
Oelrich, A. M., Hull (Biloxi, Miss.).....1st Lt., A.U.S.
Oelrich, C. D., Sioux Center (Biloxi, Miss.).....1st Lt., A.U.S.

Story County

Conner, J. D., Nevada (APO 7115, San Francisco, Cal.) .....1st Lt., A.U.S
Fellows, J. G., Ames (Ft. Leonard Wood, Mo.).....Capt., A.U.S.
Lekwa, A. H., Story City (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
McFarland, G. E., Jr.. Ames (San Pedro, Cal.)....Lt., U.S.N.R.
McFarland, J. E., Ames (Farragut, Idaho)..Lt. Comdr., U.S.N.R.
Rosebrook, L. E., Ames (Del Valle, Texas).....Capt., A.U.S.
Sperow, W. B., Nevada (San Diego, Cal.)..Lt. Comdr., U.S.N.R.
Thorburn, O. L., Ames (Alamagordo, N. Mex.).....Major, A.U.S.

Tama County

Bezman, H. S., Traer (Camp Hood, Tex.).....1st Lt., A.U.S.
Boller, G. C., Traer (Camp Bowie, Texas)
Dobias, S. G., Chelsea (APO 937, Seattle, Washington)
Havlik. A. J., Tama (San Diego, Cal.).....Lt., U.S.N.R.
Schaeferle, L. G., Gladbrook (Fort Leonard Wood, Mo.)
Standefer, J. M., Tama (San Diego, Cal.).....Lt., U.S.N.R.

Taylor County

Hardin, J. F., Bedford (APO 952, San Francisco, Cal.) .....1st Lt., A.U.S.

Union County

Paragas, M. R., Creston (Camp Beale, Cal.).....Capt., A.U.S.
Ryan, C. J., Creston (Scribner, Neb.).....1st Lt., A.U.S.

Wapello County

Brentan, Emanuel, Ottumwa (APO 252, New York, N. Y.) .....1st Lt., A.U.S
Brody, Sidney, Ottumwa (APO New York, N. Y.)..Major, A.U.S
Gilfillan, C. D. N., Eldon (Battle Creek, Mich.).....Capt., A.U.S.
Hughes, R. O., Ottumwa (Coronado, Cal.)..Lt. Comdr., U.S.N.R.
Moore, G. C., Ottumwa (Carlisle Barracks, Pa.)....1st Lt., A.U.S.
Nelson, F. L., Jr., Ottumwa (APO 4774, New York, N. Y.) .....Capt., A.U.S.
Prewitt, L. H., Ottumwa (March Field, Cal.).....Major, A.U.S.
Selman, R. J., Ottumwa (El Paso, Texas).....Lt. Col., A.U.S.
Struble, G. C., Ottumwa (Fort Harrison, Ind.)....Lt. Col., A.U.S.
Whitehouse, W. N., Ottumwa (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.

Warren County

Fullgrabe E. A., Indianola (Bethesda, Md.) Lt. (jg), U.S.N.R.
Hoffman, G. R., Lacona (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.
Shaw, E. E., Indianola (APO 834, New Orleans, La.) .....Capt., A.U.S.
Trueblood. C. A., Indianola (Camp Campbell, Ky.)..Capt., A.U.S.

Washington County

Boice, C. L., Washington (Atlantic City, N. J.).....Lt., U.S.N.
Droz, A. K., Washington (Fleet PO, San Francisco, Cal.) .....Lt. Comdr., U.S.N.R.
Mast, T. M., Washington (Portland, Ore.).....Lt. U.S.N.R.
Miller, J. R., Wellman (Camp Breckenridge, Ky.)..1st Lt., A.U.S.
Stutsman, R. E., Washington (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
Ware, S. C., Kalona (Camp McCoy, Wis.).....Capt., A.U.S.

Wayne County

Hyatt, C. N., Jr., Humeston (APO 6, San Francisco, Cal.) .....Capt., A.U.S.

Webster County

Baker, C. J., Fort Dodge (APO New York, N. Y.)...Capt., A.U.S.
Burch, E. S., Dayton (APO 4754, San Francisco, Cal.) .....Capt., A.U.S.
Burleson, M. W., Fort Dodge (Monterey, Cal.)....1st Lt., A.U.S.
Coughlan, C. H., Fort Dodge (Fort Des Moines, Iowa) .....Major, A.U.S.
Dawson, E. B., Fort Dodge (San Diego, Cal.) .....Lt. Comdr., U.S.N.R.
Glesne, O. N., Ft. Dodge (New River, N. C.).Lt. Comdr. U.S.N.R.
Joyner, N. M., Fort Dodge (Brooklyn Field, Ala.)
Kluever, H. C., Fort Dodge (Farragut, Idaho) Lt. Comdr., U.S.N.R.
Larsen, H. T., Fort Dodge (Pensacola, Fla.).....Lt., U.S.N.R.
Shrader, J. C., Fort Dodge (APO 181, Los Angeles, Cal.) .....Major, A.U.S.
Thatcher, O. D., Fort Dodge (APO 634, New York, N. Y.) .....Capt., A.U.S.
Thatcher, W. C., Fort Dodge (APO 464, New York, N. Y.) .....Capt., A.U.S.
Van Patten, E. M., Ft. Dodge (Alamogordo, N. M.).1st Lt., A.U.S.

Winneshiek County

Fritchen, A. F., Decorah (APO San Francisco, Cal.) .....Comdr., U.S.N.R.
Hospodarsky, L. J., Ridgeway (APO 560, New York, N. Y.).....Major, A.U.S.
Larson, L. E., Decorah (Farragut, Idaho) ...Lt. Comdr., U.S.N.R.
Svendsen, R. N., Decorah (San Diego, Calif.)..Lt. (jg) U.S.N.R.
Van Besien, G. J., Decorah (APO New York, N. Y.).....1st Lt., A.U.S.

Woodbury County

Bettler, P. L., Sioux City (APO San Francisco, Cal.) .....Major, A.U.S.
Blackstone, M. A., Sioux City (Pittsburg, Cal.).1st Lt., A.U.S.
Boe, Henry, Sioux City (Salina, Kan.).....Capt., A.U.S.
Burroughs, H. H., Sioux City (Fleet PO, San Francisco, Cal.) .....Lt., U.S.N.R.
‡Cmeyla, P. M., Sioux City (APO San Francisco, Cal.) .....Capt., A.U.S.
Cowan, J. A., Sioux City (Oklahoma City, Okla.) .....Major, U.S.P.H.S.
Crowder, R. E., Sioux City (San Diego, Cal.).Lt. Comdr., U.S.N.R.
Dimsdale, L. J., Sioux City (Clinton, Iowa).....1st Lt., A.U.S.
Down, H. I., Sioux City (Camp Breckenridge, Ky.) Major, A.U.S.
Elson, V. J., Danbury (Camp Walters, Tex.).....Capt., A.U.S.
Frank, L. J., Sioux City (Mare Island, Cal.).Lt. Comdr., U.S.N.R.
Graham, J. W., Sioux City (San Diego, Cal.).Lt. Comdr., U.S.N.R.
Grossman, M.D., Sioux City (APO 33, San Francisco, Cal.) .....Capt., A.U.S.
Heffernan, C. E., Sioux City (Salt Lake City, Utah) .....1st Lt., A.U.S.
Hicks, W. K., Sioux City (Spokane, Wash.).....Major, A.U.S.
Honke, E. M., Sioux City (Palm Springs, Cal.)..Capt., A.U.S.
Kaplan, David, Sioux City (Fort Bragg, N. C.)..1st Lt., A.U.S.
Knott, R. C., Sioux City (Atlanta, Ga.).....Capt., A.U.S.
Krigsten, W. M., Sioux City (Springfield, Mo.)..Lt. Col., A.U.S.
Lande, J. N., Sioux City (Santa Fe, N. Mex.).....Major, A.U.S.
Martin, R. F., Sioux City (Gallatin, Tenn.).....1st Lt., A.U.S.
Mattice, L. H., Danbury (APO 713, San Francisco, Cal.) .....1st Lt., A.U.S.
McCuistion, H. M., Sioux City (APO New York, N. Y.) .....Capt., A.U.S.
Mugan, R. C., Sioux City (Gowen Field, Idaho)..1st Lt., A.U.S.
Osincup, P. W., Sioux City (Edgewood Arsenal, Md.) .....1st Lt., A.U.S.
Rarick, I. H., Sioux City (APO 980, Seattle, Wash.)..Capt., A.U.S.
Reeder, J. E., Jr., Sioux City (Modesto, Cal.)....Capt., A.U.S.
Ryan, M. J., Sioux City (Topeka, Kan.).....Capt., A.U.S.
Schwartz, J. W., Sioux City (Ft. Leavenworth, Kan.) .....Lt. Col., A.U.S.
Tracy, J. S., Sioux City (Ephrata, Wash.).....Capt., A.U.S.
Wilson, L. L., Sioux City (Camp San Luis Obispo, Cal.) .....Capt., A.U.S.

Worth County

Westly, G. S., Manly (APO 4580, San Francisco, Cal.) .....Major, A.U.S.

Wright County

Aagesen, C. A., Dows (Kansas City, Mo.).....Capt., A.U.S.
Bird, R. G., Clarion (Sacramento, Cal.).....Lt. Comdr., U.S.N.R.
Doles, E. A., Clarion (Phoenix, Ariz.)
Gorrell, R. L., Clarion (Buffalo, N. Y.)..... U.S.N.R.
Leinbach, S. P., Belmond (Farragut Air Base, Idaho)
Missildine, W. H., Eagle Grove (APO 25, San Francisco, Cal.) ..... Capt., A.U.S.

(*) Reported missing in action.
(†) Reported killed in action.
(‡) Reported prisoner of war.

WOMAN'S AUXILIARY NEWS

MRS. KEITH M. CHAPLER, *Chairman of Press and Publicity Committee*, Dexter, Iowa

President—MRS. W. S. REILEY, Red Oak
President-Elect—MRS. J. C. DECKER, Sioux City
Secretary—MRS. A. G. FELTER, Van Meter
Treasurer—MRS. A. E. MERKEL, Des Moines

CREDO OF THE DOCTOR'S WIFE IN WARTIME†

MRS. WILLIAM HIBBITTS, Texarkana, Texas
Chairman, Program Committee

I am the American doctor's wife. I am anxious to render my best service to America and believe this can be done by helping to maintain her present high standard of health. I feel that the most effectual way to do this is through my Auxiliary to the County Medical Society. My doctor husband is serving America through his profession and his medical association. My part shall be to serve through my Auxiliary. Health education is one of the main objectives of the Woman's Auxiliary to the American Medical Association. Furtherance of this program shall be our wartime program.

I shall urge every member of my Auxiliary to have a complete physical examination, for soon our doctors will be too busy to give us the special attention which we have enjoyed in the past. Such an examination is an individual responsibility which each of us must assume. I feel that now more than ever it is vitally important to me, to my family and to the servants in my household to be examined. I shall ask my Auxiliary to sponsor such a check-up for everyone and to present programs on "What is a physical health examination, anyway?" and "Rules of the Game."*

My Auxiliary will give special study to local health problems and cooperate with local health authorities in correcting any conditions which could prove to be a hazard to public health; particularly those made acute by military and defense plants. My Auxiliary shall do everything within its power to preserve the health of women in defense work and to remind constantly that local neglect is the basis for national health problems.

I shall ask my Auxiliary to appoint a nutrition council this year with a trained instructor from our own group, if one is qualified. This council shall urge all members to take a standard course in nutrition and to study the advanced course for canteen workers. Food conservation, too, and how to plan a well balanced diet despite the restrictions of certain foods occasioned by emergency rationing, shall be stressed.

I shall urge our members to work with the Red Cross, to take a course in first aid, home nursing or nurses aide so that we shall be ready to replace the nurses who are being called to serve with our armed forces.

I shall attempt to build and try ever to maintain a high state of morale in my community, and stress simplicity in our social gatherings of our medical group through timely book reviews and through public relations meetings to instruct the laity on matters of health with particular emphasis on mental hygiene.

Each day brings new changes in our government. It shall be my duty to be better informed on legislative matters, particularly medical legislation. I believe we should study facts about inflation this year and do what we can to prevent this disaster.

If I am to be a good neighbor to South America and to Canada, I must know something about these countries and their practice of medicine. I believe we should profit greatly through studying the effects of war on the health of the English people.

I shall keep abreast of the changes taking place in American medicine, and be informed on what the American doctor is doing to help win the war.

I shall subscribe to and carefully read the BULLETIN. It will keep me informed as to the plans and accomplishments of other Auxiliaries and serve as a measuring stick for my own group.

I shall seek to have more Auxiliary quiz programs this year, as these contests are always very enjoyable. In turn I shall be very glad to assist in preparing other quiz programs for my county and state auxiliary from the excellent material contained in *Hygeia* and the Hand Book. A review of "Be Informed,"** which gives information about the American Medical Association, the Woman's Auxiliary, Public Relations and Legislation, shall be a feature of this year's program.

Panel discussions, always a source of valuable information, shall be an aim during the year, and if possible I shall have county or state health officials as guest leaders.

I shall urge my Auxiliary to have a public speak-

†From the August, 1942, issue of The Bulletin.

*Can be obtained from the American Medical Association, 535 North Dearborn Street, Chicago.

**Copy sent on request to the National Program Chairman.

ing class twice a month so I may become a well informed and interesting speaker on topics of health and medical economics.

I shall urge our Auxiliary to read and promote the sale of *Hygeia* and to use the valuable material presented in this authentic health magazine. I shall encourage our members to request articles from the Health Bureau of the American Medical Association and to study the survey of women's health interests which has been compiled by the Bureau of Health Education of the American Medical Association.

I shall always insist that our Advisory Committee be consulted about all of our plans and policies.

My Auxiliary shall become a training school where I shall strive to learn to be a leader in health work and thus I shall serve my community and my country.

Dallas-Guthrie Society

The Auxiliary to the Dallas-Guthrie Medical Society met with the doctors for luncheon at the Presbyterian Church Hall in Panora October 21, 1943.

Ten Auxiliary members were present at the meeting which followed in the Woman's Club Room. The president, Mrs. A. G. Felter, was in the chair. An Auxiliary campaign was planned for obtaining subscriptions to *Hygeia*.

Mrs. H. W. Smith of Woodward reported on the state convention of the Auxiliary. Mrs. Felter and Mrs. Chapler brought notes on the fall Board Meeting of the Woman's Auxiliary with much emphasis on the need for disseminating information relating to the Wagner-Murray Bill.

The program consisted of the reading of the Florence Nightingale Oath by Mrs. Chapler and an excellent analysis of the United States Cadet Nurse Corps by County Nurse Mrs. H. E. Longren of Guthrie Center.

Mrs. P. W. Beckman, Perry

Red Oak Meeting

The Auxiliaries to the Pottawattamie and Montgomery County Medical Societies met with the doctors at the President's Meeting held at Murphy Memorial Hospital in Red Oak November 2, 1943. Mrs. W. S. Reiley, state president of the Woman's Auxiliary, was a special guest and Dr. R. L. Barnett of Atlantic presided in the absence of Dr. M. C. Hennessy, president-elect of the Iowa State Medical Society. Dinner was served at 6:00 p. m., following which a most interesting program was presented. G. N. Best, M.D., of Council Bluffs spoke on The Use of Vitamins in General Practice; E. B. Floersch, M.D., of Council Bluffs discussed Recent Developments in Sulfonamide Therapy; Grant Augustine, M.D., of Council Bluffs talked on The Wagner-Murray-Dingell Bill, the New AMA Council and NPC; R. L. Barnett, M.D., of Atlantic spoke on The Old Age Assistance Program; and J. B. Thornell, M.D., of Council Bluffs discussed The Federal Program for Emergency Maternal and Infant Care.

Mrs. George Egermayer, Elliott

SPEAKERS BUREAU RADIO SCHEDULE

Wednesdays—WOI at 2:05 p. m.
Thursdays—WSUI at 9:00 a. m.

December	1- 2	Tuberculosis— Daniel R. Webb, M.D.
December	8- 9	Group Hospitalization— Edson P. Lichty
December	15-16	Scarlet Fever— Joshua E. Bacon, M.D.
December	22-23	Winter Health Hazards— Theodore W. Lichter, M.D.
December	29-30	Recent Developments in Medicine— Don W. Chapman, M.D.

ANOTHER PATRIOTIC RESPONSIBILITY

(Continued from page 562)

and have no means of transportation in their family may ask the bus to pick them up as formerly. In order to make sure that the request has a genuine basis of fact behind it, a physician's statement is required.

The Journal recognizes the fact that many parents go to their family physician and ask him to sign such a statement and that it is difficult for him to refuse. However, he also has a responsibility to his country, just as he has in regard to fuel oil rationing, food rationing, gasoline rationing, and the like. We know when the final reckoning is made, the physicians of the country will have reason to be proud of their record for compliance with civic and patriotic regulations.

It is to be expected that when a new program is inaugurated there will be some abuses until it is fully understood. We understand that in one district the requests made for pupils unable to walk to the bus route will restore every mile of the former schedule. Requests have been made for persons who are very active in sports events, who play basketball, dance, and enter into the full social life of the school, yet the statements made for them is that they are not able to walk a quarter of a mile to the main highway.

Realizing that it is difficult for a physician to refuse to sign a statement for a family which he has served for many years, the Journal suggests that it might be advisable to have a committee in the county medical society pass upon the requests and accept or reject them. This would remove much of the pressure now being put on the family physician and still safeguard the child who really cannot walk the distance necessitated by the new bus routes. We know we can rely on the physician to be fair to his patients and still keep in mind his responsibility in necessary wartime conservation measures.

SOCIETY PROCEEDINGS

Appanoose County

The Appanoose County Medical Society held its November meeting in Centerville Monday evening, November 15. Two scientific motion pictures were presented to the Society: Vaginal Repair of Cystocele and Rectocele by Arthur H. Curtis, M.D., of Chicago, and Hemorrhoids and a Method of Hemorrhoidectomy by Frederick B. Campbell, M.D., of Kansas City.

Black Hawk County

The Black Hawk County Medical Society held its regular monthly meeting in Waterloo Tuesday, November 16, at Black's Tea Room at 6:30 p. m. The scientific program consisted of a discussion on Vitamin Therapy in General Practice by Burr C. Boston, M.D., of Waterloo, and a talk on Sulfonamide Therapy by Sterling A. Barrett, M.D., also of Waterloo.

Dallas-Guthrie Society

The Dallas-Guthrie Medical Society held its annual election of officers at its meeting in October. Those elected to serve during the coming year include: Dr. Howard F. Clark of Stuart, president; Dr. Arthur J. Ross, Jr., of Perry, vice president; and Dr. Samuel J. Brown of Panora, secretary and treasurer.

Dickinson County

Members of the Dickinson County Medical Society met in Spirit Lake Monday evening, November 22. The scientific program consisted of a film on Cancer of the Female Breast by Frank E. Adair, M.D., of New York City.

Hardin County

The regular monthly meeting of the Hardin County Medical Society was held in Iowa Falls Tuesday, November 16, at the Princess Cafe at 6:30 p. m. The guest speaker of the evening was Alonzo L. Jenks, Jr., M.D., of Des Moines, who presented a paper on The Recognition of Pernicious Anemia and Its Treatment. Following this there was a short discussion of the Wagner-Murray Bill and its effect on the present system of medical treatment.

W. E. Marsh, M.D., Secretary

Johnson County

Members of the Johnson County Medical Society met in Iowa City Wednesday, November 3, at Hotel Jefferson. Dinner was served at 6:00 p. m., following which the guest speaker of the evening, Charles O. Geise, M.D., Colorado Springs, Colorado, discussed The Present Status of the General Practitioner in the Diagnosis of Tuberculosis. Dr. Geise is Medical Director of the Woodmen Sanatorium.

A. L. Sahs, M.D., Secretary

Louisa County

The regular monthly meeting of the Louisa County Medical Society was held in Wapello Thursday evening, November 11. The evening was spent in discussing matters pertinent to the Society.

Marshall County

The Marshall County Medical Society held its regular monthly meeting in Marshalltown Tuesday evening, November 2, at Hotel Tallcorn. The scientific program featured two motion pictures: Varicose Veins: Their Treatment by the Modern Ligation and Injection Treatment by H. O. McPheeters, M.D., of Minneapolis, and Primary Cleansing, Compression and Rest Treatment of Burns by Vinton E. Siler, M.D., of Cincinnati.

Pocahontas County

The Pocahontas County Medical Society met at the home of Dr. Walter E. Gower in Pocahontas Thursday evening, November 18. A discussion was held concerning the Wagner-Murray-Dingell Bill and also the Emergency Maternity and Infant Care Program. The Society voted its approval of the principle set forth by the Committee on Maternity and Child Health in regard to the Emergency Maternity and Infant Care Program. Following adjournment of the business meeting, refreshments were served by the host.

G. A. Everson, M.D., Secretary

Sac County

Members of the Sac County Medical Society met in Sac City Thursday evening, November 4, at the Coffee Shop. Following dinner John H. Stalford, M.D., of Sac City presented a paper on Mortality Trends from 1900 to 1940.

Wapello County

The Wapello County Medical Society held two evening meetings during the month of November at St. Joseph Hospital in Ottumwa. On Tuesday, November 2, the scientific program consisted of a

film on Cardiac Irregularities by Carl J. Wiggers, M.D., Cleveland, which was discussed by Vernon S. Downs, M.D., of Ottumwa. On Tuesday, November 16, Harold A. Spilman, M.D., of Ottumwa, presented a paper on Gallbladder Disease.

L. A. Taylor, M.D., Secretary

Woodbury County

A joint meeting of the Woodbury County Medical Society, the Northwest District Dental Society, the Sioux Drug Travelers, and guests, was held in Sioux City Thursday, November 18, at the Mayfair Hotel at 7:00 p. m. The guest speaker of the evening was Charles M. Wilhelmj, M.D., Dean and Professor of Physiology, Creighton University College of Medicine, who spoke on Present Social, Economic and Educational Trends Affecting Medicine, Dentistry and Pharmacy.

R. T. Rohwer, M.D., Secretary

PERSONAL MENTION

Dr. Eugene A. McCabe, formerly of Sioux City and Ponca, Nebraska, has located in Forest City. Dr. McCabe has taken over the practice of Dr. Thomas J. Irish, who recently was commissioned a Lieutenant Commander in the Navy.

Dr. Leslie W. Swanson of Mason City spoke before the Retail Credit Club of that city Monday evening, November 15, at the Green Mill. The subject of Dr. Swanson's discussion was the Wagner-Murray Bill.

Dr. Smith C. Kirkegaard, who has been located in Ringsted for the past several years, has moved to Estherville where he is occupying the office recently vacated by Dr. Loren E. Collins. Dr. Collins is now in military service.

Dr. Norman D. Render of Clarinda addressed the Rotary Club of Red Oak at its dinner meeting Monday evening, October 18, at Hotel Johnson. Dr. Render talked on the care of mental patients at the State Hospital in Clarinda, of which he has been superintendent for the past two years.

Dr. Charles W. Edmonds has discontinued practice in Onawa where he had been located for the past year. He plans to locate in Sioux City in the Morningside district.

Dr. M. C. Hennessy of Council Bluffs spoke before a joint meeting of the Rotary and Lions Clubs of Atlantic Tuesday evening, November 16, at Hotel Whitney. The subject of his discussion was the proposed legislation to socialize medicine. Dr. Hennessy also spoke on the same subject before the Kiwanis Club of Logan Thursday evening, October 21, and before the Kiwanis Club of Council Bluffs Monday noon, October 18.

Dr. J. Donald Anderson, formerly of Broadlawns General Hospital in Des Moines, has become associated in the practice of medicine with Dr. Fred Sternagel of West Des Moines.

Dr. Wilbur R. Miller, head of the Department of Psychiatry at the State University of Iowa College of Medicine, was guest speaker at a luncheon meeting of the Child Study Club of Iowa City Saturday noon, November 13, at Hotel Jefferson. The topic of his discussion was Behavior Problems of Children. Dr. Miller also spoke before the Kiwanis Club of Iowa City at its noon meeting Tuesday, October 26. His subject for that group was Psychiatric Aspects of the Present War.

Dr. Sebastian Ambery has located in Keokuk for the practice of medicine and surgery. He is established in the offices formerly occupied by Dr. George H. Ashline, who is now serving overseas with the Army of the United States. Prior to locating in Keokuk Dr. Ambery was at Augustana Hospital in Chicago.

Dr. James E. Dyson of Des Moines spoke before the Lions Club of that city Thursday noon, November 4. Dr. Dyson discussed Infantile Paralysis and also presented a motion picture on the subject.

DEATH NOTICES

Koch, Fred Edward, of Burlington, aged sixty-five, died November 13 following an extended illness. He was graduated in 1901 from the St. Louis College of Physicians and Surgeons, and at the time of his death was a member of the Des Moines County Medical Society.

Munden, Ralph Edward, of Cedar Rapids, aged fifty-six, died November 15 of pneumonia and peritonitis. He was graduated in 1909 from Milwaukee Medical College, and at the time of his death was a member of the Linn County Medical Society.

Sperow, William Edgar, of Carlisle, aged seventy-three, died November 10 of a heart ailment. He was graduated in 1894 from the University of Maryland School of Medicine and College of Physicians and Surgeons, and at the time of his death was a member of the Warren County Medical Society.

Walker, Benjamin S., of Corydon, aged seventy, died November 2 following an extended illness caused by a heart ailment. He was graduated in 1900 from Keokuk Medical College, College of Physicians and Surgeons, and at the time of his death was a life member of the Wayne County and Iowa State Medical Societies.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WALTER L. BIERRING, Des Moines, Chairman
DR. HENRY G. LANGWORTHY, Dubuque, *Secretary*
DR. JOHN T. McCLINTOCK, Iowa City
DR. MURDOCH BANNISTER, Ottumwa
DR. FRANK E. SAMPSON, Creston

Medical History of Woodbury County

WILLIAM JEPSON, M.D., Sioux City

PART IV

(Continued from last month)

METHODIST HOSPITAL

"The Methodist Hospital was established in Sioux City as a result of the Northwest Iowa Conference, being proffered the property known as the St. Johns Hospital, located at Fourteenth and Jones Street in Sioux City, Iowa, by the owner, Dr. William Jepson, provided the Methodist Episcopal Church would establish and promote the building of an outstanding Protestant Hospital in this City. This offer was made at the session of the Northwest Iowa Conference held in Sioux City, October 16, 1919.

"A Committee of nine were appointed to consider the gift. Under this resolution Bishop Homer C. Sturtz of the Omaha Area entered into covenants with the donor of aforementioned property and proceeded to incorporate, and a Board of Trustees to raise the fund for refurnishing and opening the Hospital, received by gift from Dr. Jepson, was appointed.

"At the session of the Conference on October 29th, the Committee reported its actions to the Conference which were approved.

"Later the Committee on Correlation of Conference interests, reported:

"(a) That as a Conference we undertake the task on this 'New Day of Ministering to the Sick,' and that we have a Hospital Policy broad enough to meet the needs of our people in all sections of our Conference.

"(b) That we endorse the acceptance of the Hospital located at Fourteenth and Jones Street, Sioux City, Iowa.

"(c) We favor a movement, having for its objective, a building with a capacity of at least 250 beds.

"On October 20, 1920, the Hospital began operations in the St. Johns Hospital Building, and its activities were carried on there until February 1, 1924, when the Samaritan Hospital property at 17th and Pierce Street was used until December 1, 1925. In the meantime funds had been provided for the erection and equipment of its new hospital upon property which had been secured at Twenty-ninth and Douglas Streets; and on October 20th, the cornerstone was laid and on November 29, 1925, the Hospital was completed at a cost of $418,000.00, and was dedicated and immediately opened for the reception of patients.

"The Hospital is modern and complete in every detail. It has five operating rooms, equipped according to the highest standards. Its Clinical Laboratory and X-ray Department have no superior in this section. It is a Class A Hospital, of 125 beds capacity and duly recognized by the A. C. S. It conducts a Class A Nursing School."

JULY 6, 1893—POMEROY CYCLONE

That Sioux City once awakened from her lethargy and, becoming conscious of her sanitary and hospital needs, was not slow in overcoming her defects in these respects is disclosed by the rôle she played and the services she rendered to the sufferers of the Pomeroy cyclone.

On July 6, 1893, there appeared a cyclone or tornado within fifty-six miles, in Cherokee County. It passed east through Buena Vista and Pocahontas Counties, leaving in its pathway a destruction of life and property greater than that of any similar visitation in Iowa or the Midwest of which

there was any record. While its destruction of property was not as great, its destruction of life was greater than the Grinnell tornado of June 7, 1882.

It struck the town of Pomeroy about 7:00 p. m. and leveled practically everything that stood above ground and converted it into kindling wood; how anyone could escape death is miraculous.

Those who did escape death suffered from all kinds of injuries. This is well illustrated by the injuries sustained by Jesse Pruden, a boy about ten years of age who did not have an area of three-inch diameter upon his body which was not the seat of contusions or wounds. The wounds were impregnated with mud, sand, straw, and splinters of wood; one piece about the size of the index or middle finger and two inches long had been driven into his perineum for a distance of about three inches and broken off, leaving only a skin wound which concealed its presence for three days. Besides this he had a fracture of the nasal and right malar bones of the inferior maxillae and the right forearm, a lacerated wound of the right thigh about six inches long and two or three inches deep, and a somewhat similar but smaller wound of the left leg. He recovered. His sister had a chair rung driven into her thoracic cavity. She died eight days later in a train on the way to Sioux City.

The injuries sustained were of practically every type conceivable: fractures of the skull (3), fractures of the femur (3), fractures of the pelvis (5), and fractures of arms, forearms, and legs. Many of these fractures were compound and, under the conditions, usually infected. Two patients, one of whom died, developed gangrene requiring amputation. There were two cases of perforation of the chest and three of the pelvis. It was remarkable that no cases of tetanus appeared, although the most favorable conditions for its development were present; namely, hundreds, if not thousands, of lacerated and puncture wounds, great and small, with all kinds of foreign material carried into them. No tetanus antitoxin was employed.

The gravity of the injuries is apparent from the fact that of forty-nine deaths, forty-one resulted from the effect of the storm and eight died subsequent thereto. Of the seriously injured individuals forty-eight were removed to the Samaritan and St. Joseph Hospitals of Sioux City a week after the storm.

(FROM THE STORY OF A STORM)

"Friday afternoon a relief train brought a delegation of surgeons from Sioux City, Cherokee and Storm Lake, who, disregarding the previous organization, called a meeting of surgeons and established surgeons headquarters in the lumber office near the railroad. Dr. E. Hornbrook of Cherokee was chairman and Dr. R. E. Conniff of Sioux City, secretary. Dr. Jepson of Sioux City was elected Surgeon in Chief."

Governor Boise, the following day, appointed him to assume full responsibility for the care of the patients, the Governor having placed the area under military control.

By July 8, forty-five physicians from the various surrounding towns and cities had registered and rendered valiant services. The following physicians were registered from Sioux City:

A. C. Bergen
A. M. Brown
R. H. Brown
R. E. Conniff
W. H. Hoyt
Wm. Jepson
J. P. Johnson
J. J. Miller
F. J. Murphy
E. R. Park
G. C. Rich
J. J. Schleswig
G. Schott
Dr. Wade
J. N. Warren

Other physicians registered were:

A. L. Belt, Gilmore City
C. I. Burt, Lake City
M. S. Butler, Cherokee
R. W. Cavette, Lake City
L. R. Cleaves, Cherokee
F. E. Devereux, Fort Dodge
D. W. Edgar, Fonda
R. Evans, Fort Dodge
W. E. Green, Webster City
R. H. Heors, Rock River City
E. Himery, Humboldt
Edwin Hornbrook, Cherokee
W. W. McMackin, Lake City
J. D. McVay, Lake City
H. S. Meier, Fort Dodge
H. Milarky, Jr., Manson
J. S. Nelson, Fort Dodge
A. A. Pratt, Pilot Mound
H. G. Ristine, Fort Dodge
C. J. Sanders, Fort Dodge
F. E. Seymour, Fort Dodge
J. W. Somers, Callender
W. L. Speaker, Manson
A. W. Storms, Storm Lake
C. F. Swenson, Melbourne
D. J. Townsend, Lohrville
G. E. Townsend, Gowrie
R. J. Townsend, Jolly
A. H. Wright, Pomeroy
D. W. Wright, Pomeroy

It is, of course, needless to say that all medicine and surgical dressings and services were a gratuity.

(To be continued)

SAVE MEDICAL JOURNALS

Dr. Jeannette Dean-Throckmorton, Librarian of the Iowa State Medical Library, located in the Historical Building in Des Moines, is most anxious to receive old copies of medical journals. They should be sent direct to her.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

GASTRO-ENTEROLOGY, Volume I, The Esophagus and Stomach—by Henry L. Bochus, M.D., professor of gastro-enterology, University of Pennsylvania Graduate School of Medicine. W. B. Saunders Company, Philadelphia, 1943.

NUTRITION AND DIET IN HEALTH AND DISEASE—By James S. McLester, M.D., professor of medicine, University of Alabama, Birmingham, Alabama. Fourth edition, thoroughly revised. W. B. Saunders Company, Philadelphia, 1943. Price, $8.00.

RECONSTRUCTIVE SURGERY OF THE EYELIDS—By Wendell L. Hughes, M.D., Hempstead, New York. The C. V. Mosby Company, St. Louis, 1943. Price, $4.00.

THE MIND OF THE INJURED MAN—By Joseph L. Fetterman, M.D., assistant clinical professor of nervous diseases, Western Reserve University School of Medicine, Cleveland, Ohio. Industrial Medicine Book Company, Chicago, 1943. Price, $4.00.

NERVOUS INDIGESTION AND PAIN—By Walter C. Alvarez, M.D., professor of medicine, University of Minnesota (Mayo Foundation); consultant in the division of medicine, The Mayo Clinic, Rochester, Minnesota. Paul B. Hoeber, Inc., New York, 1943. Price, $5.00.

ESSENTIALS OF SYPHILOLOGY—By Rudolph H. Kampmeier M.D., associate professor of medicine, Vanderbilt University School of Medicine; in charge of the Syphilis Clinic and visiting physician to Vanderbilt University Hospital; with chapters by Alvin E. Keller, M.D., and J. Cyril Peterson, M.D. The J. B. Lippincott Company, Philadelphia, 1943. Price, $5.00.

MEDICAL PARASITOLOGY—By James T. Culbertson, assistant professor of bacteriology, College of Physicians and Surgeons, Columbia University. Columbia University Press, New York, 1942. Price, $4.25.

BLOOD GROUPING TECHNIC—By Fritz Schiff, M.D., late chief of the department of bacteriology, Beth Israel Hospital, New York; and William C. Boyd, Ph.D., associate professor of biochemistry, Boston University School of Medicine. Interscience Publishers, Inc., New York, 1942. Price, $5.00.

THE 1942 YEAR BOOK OF GENERAL THERAPEUTICS—Edited by Oscar W. Bethea, M.D., professor of clinical medicine, Tulane University School of Medicine. The Year Book Publishers, Chicago, 1942. Price, $3.00.

THE PRINCIPLES AND PRACTICE OF OBSTETRICS—By Joseph B. DeLee, M.D., formerly professor of obstetrics and gynecology, emeritus, University of Chicago, consultant in obstetrics, Chicago Lying-in Hospital and Dispensary, consultant in obstetrics, Chicago Maternity Center; and J. P. Greenhill, M.D., attending obstetrician and gynecologist, Michael Reese Hospital, obstetrician and gynecologist, associate staff, Chicago Lying-in Hospital, attending gynecologist, Cook County Hospital, professor of gynecology, Cook County Graduate School of Medicine. Eighth edition, entirely reset. W. B. Saunders Company, Philadelphia, 1943. Price, $10.00.

THE ANATOMY OF THE NERVOUS SYSTEM—By Stephen Walter Ranson, M.D., Ph.D., formerly professor of neurology and director of Neurological Institute, Northwestern University Medical School, Chicago. Seventh edition, revised. W. B. Saunders Company, Philadelphia, 1943. Price, $6.50.

NEUROSURGERY AND THORACIC SURGERY, Military Surgical Manuals Volume VI—Prepared and edited by the Subcommitttee on Neurosurgery and Thoracic Surgery of the Committee on Surgery of the Division of Medical Sciences of the National Research Council. W. B. Saunders Company, Philadelphia, 1943. Price, $2.50.

SYNOPSIS OF PATHOLOGY—By W. A. D. Anderson, M.D., assistant professor of pathology, St. Louis University School of Medicine; pathologist, St. Mary's Group of Hospitals. The C. V. Mosby Company, St. Louis, 1942. Price, $6.00.

METHODS OF TREATMENT—By Logan Clendening, M.D., clinical professor of medicine, Medical Department of the University of Kansas, attending physician, University of Kansas Hospitals; and Edward H. Hashinger, M.D., clinical professor of medicine, Medical Department of the University of Kansas, attending physician, University of Kansas Hospitals, attending physician, St. Luke's Hospital, Kansas City, Missouri. Eighth Edition. C. V. Mosby Company, St. Louis, 1943. Price, $10.00.

BOOK REVIEWS

DISEASES OF THE SKIN

By Oliver S. Ormsby, M.D., Rush professor of dermatology, University of Illinois, and Hamilton Montgomery, M.D., associate professor of dermatology and syphilology, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota, Rochester, Minnesota. Sixth edition, thoroughly revised. Lea & Febiger, Philadelphia, 1943. Price, $14.00.

This work has long been considered a standard text on diseases of the skin, and the recent, revised edition brought out with the aid of Montgomery is an even better addition to one's library.

Much of the text has been revised and rewritten. Material rendered obsolete through recent discoveries has been eliminated and several new chapters have been added.

The authors have retained the brevity of former editions without sacrificing thoroughness. The text is well illustrated. Discussions of pathology and mycology have been amplified. Altogether, this work can be ranked among the best for reference or for study. J. W. Y.

FUNDAMENTALS OF IMMUNOLOGY

By William C. Boyd, Ph.D., associate professor of biochemistry, Boston University School of Medicine. Interscience Publishers, Inc., New York, 1943. Price, $5.50.

According to the author, the purpose of this book is "to serve as an introduction to immunology for medical students, chemists, biologists, and others interested in an understanding of the basic principles of the science."

While the book will undoubtedly be of most use in the fields indicated by the author, nevertheless it is a worthwhile reference text for any physician to have at hand who wants to know the "why and how" of things. Its value in this connection is enhanced by the fact that the author has taken pains to indicate the clinical application of many of the procedures under discussion. Particularly noteworthy are the chapters on blood groups, antibody-antigen reactions, and anaphylaxis and allergy. The difference between atopic and nonatopic hypersensitiveness is clearly explained. The technic of many laboratory procedures is given which, of course, is of primary interest to laboratory workers.

All in all, the reviewer is of the opinion that the author has done an excellent job of presenting what to the average physician is a complicated subject.

L. F. H.

AN INTRODUCTION TO MEDICAL MYCOLOGY

By George M. Lewis, M.D., assistant professor of clinical medicine (dermatology), Cornell University Medical School; associate attending physician (dermatology), The New York Hospital; attending dermatologist to St. Clare's Hospital; visiting dermatologist to Welfare Hospital; and Mary E. Hopper, M.S., research fellow in medicine, Cornell University Medical School. The Year Book Publishers, Inc., Chicago, 1943. Price, $6.50.

This book has a concise, readable way of presenting the subject of the mycoses. Although written by a dermatologist, and therefore of main interest to dermatologists, it includes a discussion of all that is known about the internal mycoses and should be of interest to the internist and neurologist. It is profusely illustrated with pictures of the involved skin and with excellent illustrations of the different fungi themselves.

The text includes a simple, fully outlined method for bacteriologic diagnosis of the different pathogenic fungi and their separation from the common saprophytes. In view of the increase in mycoses which can be expected in men returning from combat duty in tropical areas, it would not be amiss for even the general practitioner to become familiar with this book.

I. A.

NASAL MEDICATION
A Practical Guide

By Noah D. Fabricant, M.D., associate in laryngology, rhinology, and otology, University of Illinois College of Medicine. The Williams & Wilkins Company, Baltimore, 1942. Price, $2.50.

This book of only a little more than a hundred pages is an excellent coverage of an important and timely subject. Today there are many confusing ideas in regard to nasal medication. A drug is often prescribed without thought of its physiologic action. Doctor Fabricant includes a short review of the histology, histopathology, anatomy, and physiology of the nose. This is correlated with the various therapeutic measures and clarifies the subject considerably. The effect of drugs on ciliary action and the nasal pH is particularly illuminating. In these days of so much self nasal medication it behooves us to know just why we should advise our patients against this habit.

Dr. Fabricant's book on nasal medication is well worth the reading time of not only the general practitioner but also the otolaryngologist.

C. C. G.

MANUAL OF FRACTURES
Treatment by External Skeletal Fixation

By C. M. Shaar, Captain, Medical Corps, United States Navy; and Frank P. Kreuz, Jr., Lieutenant Commander, Medical Corps, United States Navy. W. B. Saunders Company, Philadelphia, 1943. Price, $3.00.

This manual has been compiled to serve as a handbook for the surgeon and a guide for the beginner interested in the field of external fixation. The use of the Stader apparatus is fully described and excellent illustrations accompany the text. The authors explain the advantages of this method of treatment for fractures sustained by members of the armed services in 157 consecutive cases.

Primarily of interest to orthopedic surgeons, physicians will find the book of interest as a primer for the use of the Stader splint.

E. M. G.

A HUNDRED YEARS OF MEDICINE

By Drs. C. D. Haagensen and Wyndham E. B. Lloyd. Sheridan House, Inc., New York, 1943. Price, $3.75.

The recording of a hundred years of medicine in a single popular-sized volume is no small task. To the great credit of Dr. Haagensen, surgeon and pathologist on the faculty of Columbia University School of Medicine, and Dr. Lloyd, specialist in public health working in England, as joint authors, it may truthfully be said that they have done so in a remarkably brief, comprehensive, and most fascinating manner.

In a general way the contents comprise four main divisions: (I) Medicine Up to a Hundred Years Ago, (II) Medical Science During the Last Hundred Years, (III) Surgery During the Last Hundred Years, and (IV) New Social Aspect of Medicine. One is particularly startled by the forty-two pages of unusual illustrations which take deep root in one's mind. It is well said that "one picture is the equal of ten thousand words." The attached bibliography and extensive index of the volume are especially pleasing for ready reference. The latest discoveries and new methods and drugs are all to be found in the volume. The arrangement of chapters is unusually good in taking the reader smoothly and easily along the series of steps of advancement made by the many famous workers over the past one hundred years.

Every general practitioner or specialist will be more of an expert in dealing with medicines, methods, or operations if he knows, rather intimately, something about the historic origin and human equations of those who by their discoveries made contributions of lasting value to the world. Both the scientist and the layman will find the book most interesting and educational in the broadest sense of the word. It should be required reading on the part of all premedic students. Further, since a historical paragraph for papers read before medical societies has become another of the most recent ne-

cessities for clarity and understanding of subjects, this volume will do much to supply information.

In closing, the reviewer feels impelled to say that words cannot express the appreciation, delight, and value which he has experienced in reading this single volume. Its teaching through the truths of history are with one always. It certainly should be "must" reading on the part of all physicians and medically inclined people. H. G. L.

A SYNOPSIS OF CLINICAL SYPHILIS

By James Kirby Howles, M.D., professor of dermatology and syphilology, and director of the department, Louisiana State University School of Medicine; senior visiting physician, Charity Hospital of Louisiana at New Orleans; visiting physician, French Hospital, Mercy Hospital, Hotel Dieu, Southern Baptist Hospital and Touro Infirmary. The C. V. Mosby Company, St. Louis, 1943. Price, $6.00.

This volume is precisely what the title indicates. The various manifestations of the stages of syphilis and the clinical and laboratory methods of diagnosis are summarized briefly.

The author, in addition to the general presentation, includes a section on systemic and regional syphilis in which the manifestations of the disease on each system are discussed. The section on congenital syphilis is brief but adequate. The therapy of the disease is presented according to the usual methods of treatment and there is also a discussion of massive arsenical therapy. The author stresses that while the result of massive arsenical therapy appears brilliant, caution must be exercised in forming conclusions too soon. The book is well illustrated, but could be much improved by color plates instead of the conventional black and white illustrations. M. J. R.

NEW AND NONOFFICIAL REMEDIES, 1943

Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1943. American Medical Association, Chicago, 1943. Price, $1.50.

The current volume of New and Nonofficial Remedies continues, with minor improvements, the convenient and informative system of classification adopted for the 1942 volume. The terminology of the official drugs has been revised to conform to the U. S. P. XII and the N. F. VII. One notes that the valuable bibliographic index now appears on white instead of "India Tint" paper, a wartime necessity no doubt. This index appears before the general index which is now more properly placed at the end of the book. To one accustomed to the old format of New and Nonofficial Remedies the arrangement appears at first somewhat awkward, but with a little use the wisdom and convenience of the changes become more and more apparent.

Textual changes and revisions do not appear to be as numerous as in some previous editions. The chapter, Digitalis and Digitalis-like Principles and Preparations, has been extensively and somewhat radically revised to keep pace with the changing attitude toward this drug. It is understood that in this revision the Council had the aid of the foremost digitalis authorities, pharmacologists and clinicians alike. Other revisions have been made obviously to keep the book up to date with medical knowledge. To cite a specific revision indicating the increasing skepticism of the Council concerning a drug, it is interesting to contrast the following sentence in the 1942 general article on Chaulmoogra Derivatives, "The therapeutic properties of chaulmoogra oil appear to be due to these optically active unsaturated fatty acids of the chaulmoogra series," which in the 1943 edition reads, "Any therapeutic properties chaulmoogra oil may possess would appear to be due to these optically active unsaturated fatty acids of the chaulmoogric series."

No such spectacular new additions as the appearance in a previous volume of the sulfonamides is to be noted. Among the more noteworthy of the new additions are Nikethamide, the central nervous system stimulant which was first introduced as Coramine; Diethylstilbestrol, the synthetic estrogen; Trichinella Extract for the diagnosis of trichinosis; and Zephiran Chloride, a mixture of alkyl dimethyl benzyl ammonium chloride, an interesting new anti-infective agent.

No one can examine the successive volumes of New and Nonofficial Remedies without increasing his profound respect for the faithful and unselfish work of the Council on Pharmacy and Chemistry in the cause of rational therapeutics. Each volume represents a progressive milestone on the road of medical science.

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